Research in Blockchain and Distributed Ledger Technologies Training Course

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The rise of Blockchain Technology and Distributed Ledger Technologies (DLT) has revolutionized sectors such as finance, supply chain, cybersecurity, and healthcare, offering secure, transparent, and immutable data management solutions. Research in Blockchain and Distributed Ledger Technologies Training Course is designed to provide participants with advanced research-oriented knowledge and hands-on expertise in blockchain ecosystems, smart contracts, consensus algorithms, cryptographic techniques, and decentralized applications (dApps). Emphasis is placed on emerging trends, real-world applications, and academic frameworks to bridge the gap between theory and practice.

This course integrates industry-leading tools, methodologies, and platforms such as Ethereum, Hyperledger, Ripple, and Corda, to deepen participants' understanding of DLT architectures and their transformative potential. Through case studies, practical labs, and research assignments, learners will gain critical insight into how blockchain is reshaping digital trust, transparency, and decentralization across global industries. This training is ideal for researchers, developers, strategists, and professionals aiming to lead innovation in blockchain-related initiatives.

Programme Curriculum

Research in Blockchain and Distributed Ledger Technologies Training Course

Introduction

The rise of Blockchain Technology and Distributed Ledger Technologies (DLT) has revolutionized sectors such as finance, supply chain, cybersecurity, and healthcare, offering secure, transparent, and immutable data management solutions. Research in Blockchain and Distributed Ledger Technologies Training Course is designed to provide participants with advanced research-oriented knowledge and hands-on expertise in blockchain ecosystems, smart contracts, consensus algorithms, cryptographic techniques, and decentralized applications (dApps). Emphasis is placed on emerging trends, real-world applications, and academic frameworks to bridge the gap between theory and practice.

This course integrates industry-leading tools, methodologies, and platforms such as Ethereum, Hyperledger, Ripple, and Corda, to deepen participants' understanding of DLT architectures and their transformative potential. Through case studies, practical labs, and research assignments, learners will gain critical insight into how blockchain is reshaping digital trust, transparency, and decentralization across global industries. This training is ideal for researchers, developers, strategists, and professionals aiming to lead innovation in blockchain-related initiatives.

Course Objectives

1. Understand core principles of blockchain and DLT systems
2. Explore blockchain consensus mechanisms and algorithms
3. Conduct academic and industry-based research on blockchain applications
4. Design and deploy smart contracts using Solidity and Hyperledger
5. Investigate the role of DLT in cybersecurity and digital identity
6. Analyze token economies, NFTs, and crypto-assets
7. Examine scalability and interoperability challenges in blockchain networks
8. Implement blockchain-based solutions for supply chain transparency
9. Study the ethical, legal, and regulatory issues of DLT
10. Utilize research methodologies for blockchain innovation
11. Integrate DLT with AI, IoT, and Big Data analytics
12. Critically evaluate emerging trends and blockchain platforms
13. Present research findings and case studies in professional formats

Target Audiences

1. Blockchain Researchers and Academics
2. Software Developers and Engineers
3. Cybersecurity Analysts
4. Financial Technology Professionals
5. Government Policy Makers and Legal Experts
6. Entrepreneurs and Startup Founders
7. IT and Data Professionals
8. Graduate and Postgraduate Students in Tech

Course Duration: 5 days

Course Modules

Module 1: Introduction to Blockchain and DLT

- History and evolution of blockchain
- Key components and terminologies
- Types of distributed ledgers
- Blockchain use cases across industries
- Challenges and opportunities
- **Case Study**: Blockchain in Global Healthcare Systems

Module 2: Cryptography and Consensus Algorithms

- Hashing and digital signatures
- Public vs. private key infrastructure
- Proof-of-Work, Proof-of-Stake, and other models
- Byzantine Fault Tolerance and security
- Trade-offs in consensus mechanisms
- **Case Study**: Bitcoin’s Proof-of-Work Mechanism

Module 3: Smart Contracts and Decentralized Applications

- Solidity and smart contract development
- Deployment on Ethereum and Hyperledger
- Risks and vulnerabilities in smart contracts
- Introduction to dApps architecture
- Real-world examples of dApps
- **Case Study**: Uniswap's Decentralized Exchange

Module 4: Blockchain in Financial Technologies (FinTech)

- Blockchain in banking and insurance
- Central Bank Digital Currencies (CBDCs)
- Stablecoins and crypto assets
- Peer-to-peer lending platforms
- Blockchain for fraud detection
- **Case Study**: RippleNet and Cross-Border Payments

Module 5: Supply Chain, Identity, and Governance

- Blockchain for product traceability
- Decentralized identity systems
- Blockchain in land registry and voting
- Governance models in blockchain ecosystems
- Role of DAOs in decentralized governance
- **Case Study**: IBM Food Trust and Walmart

Module 6: Research Methodologies in Blockchain

- Qualitative vs. quantitative research
- Literature review and research design
- Data collection and analysis tools
- Case study approach in blockchain research
- Ethical considerations in blockchain studies
- **Case Study**: Comparative Analysis of Ethereum vs. Corda

Module 7: Blockchain Interoperability and Integration

- Cross-chain protocols and challenges
- Integration with IoT, AI, and Cloud
- Blockchain-as-a-Service platforms
- Blockchain data storage and oracles
- Scalability and performance issues
- **Case Study**: Polkadot's Interoperability Architecture

Module 8: Legal, Ethical, and Regulatory Perspectives

- Global regulatory landscape of blockchain
- Data privacy and compliance (GDPR, HIPAA)
- Ethical frameworks in blockchain adoption
- Intellectual property in smart contracts
- Blockchain and ESG considerations
- **Case Study**: EU MiCA Regulation on Crypto Assets

Training Methodology

- Instructor-led theoretical sessions

- Hands-on coding labs and practicals
- Group discussions and peer reviews
- Real-world case study analysis
- Capstone blockchain research project
- Access to blockchain simulation tools

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
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com