Training Course on Blockchain Technology for Agri-Food Supply Chain Traceability

Professional Development Training Course Outline

Category	Agriculture	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s digital transformation era, blockchain technology has emerged as a groundbreaking solution for agri-food supply chain traceability. From farm to fork, consumers, farmers, and supply chain stakeholders demand increased transparency, food safety, and data integrity. Integrating blockchain into agri-food systems empowers the sector to achieve real-time traceability, enhance trust, and reduce fraud and inefficiencies. Training Course on Blockchain Technology for Agri-Food Supply Chain Traceability delivers practical and technical skills in applying blockchain for traceability systems, improving sustainability, compliance, and market competitiveness in agricultural and food value chains.

This comprehensive training is tailored for professionals across agriculture, supply chain management, information systems, and sustainability. Through real-world case studies, interactive modules, and hands-on applications, learners will master how to deploy blockchain in improving logistics visibility, quality assurance, certification tracking, and digital record-keeping. Whether you're a tech innovator or a farm-to-market professional, this course equips you with the tools to build secure, efficient, and decentralized agri-food systems for the future.

Programme Curriculum

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Course Objectives

1. Understand the fundamentals of blockchain technology and its application in agri-food systems.
2. Explore traceability challenges in conventional agri-food supply chains.
3. Implement blockchain for real-time data validation and product provenance.
4. Evaluate smart contracts in food logistics and compliance processes.
5. Integrate blockchain with IoT and AI for enhanced food monitoring.
6. Analyze supply chain digitization strategies using distributed ledgers.
7. Apply blockchain to reduce food fraud, waste, and counterfeiting.
8. Assess regulatory compliance and certification processes using blockchain.
9. Build decentralized applications (DApps) for agri-food traceability.
10. Leverage blockchain to promote sustainable agriculture and ethical sourcing.
11. Compare different blockchain platforms (Ethereum, Hyperledger, etc.) for agri-food use.
12. Examine successful global case studies in blockchain-enabled food chains.
13. Develop a roadmap for implementation and stakeholder engagement.

Target Audiences

1. Agribusiness professionals
2. Supply chain managers
3. Blockchain developers
4. Food safety auditors
5. Agricultural policy makers
6. Digital transformation officers
7. Sustainability consultants
8. Researchers and academic institutions

Course Duration: 10 days

Course Modules

Module 1: Introduction to Blockchain and Distributed Ledger Technology

- Understanding blockchain basics
- Key components: blocks, hashes, nodes
- Types: public vs private blockchains
- Advantages of blockchain for agri-food
- Challenges and limitations
- **Case Study:** Blockchain basics in India’s agri-market system

Module 2: Overview of Agri-Food Supply Chain Dynamics

- Value chain actors and processes
- Pain points in traditional systems
- Food safety and quality challenges
- Importance of traceability
- Demand for digital transformation
- **Case Study:** Food recalls in the U.S. and traceability gaps

Module 3: Blockchain for End-to-End Traceability

- Defining traceability and provenance
- Blockchain-based record keeping
- Linking origin to destination
- Real-time product tracking
- Use of digital tags and QR codes
- **Case Study:** IBM Food Trust and Walmart mango traceability

Module 4: Smart Contracts in Agri-Food Systems

- What are smart contracts?
- Automating transactions and compliance
- Reducing human error
- Contract enforcement in food trade
- Integrating payment systems
- **Case Study:** Coffee certification smart contracts in Ethiopia

Module 5: Blockchain Platforms and Tools

- Ethereum vs. Hyperledger vs. Corda
- Features and functionalities
- Choosing the right platform
- Interoperability in systems
- Tools for development and testing
- **Case Study:** Hyperledger Fabric in supply chains

Module 6: IoT Integration with Blockchain

- IoT sensors and agri-data capture
- Real-time environmental monitoring
- Cold chain management
- Connectivity challenges
- Sensor-to-ledger data flow
- **Case Study:** IoT-Blockchain hybrid in seafood traceability

Module 7: Data Privacy and Security

- Cybersecurity in agri-blockchains
- GDPR and data ownership
- Encryption and secure data sharing
- Role-based access controls
- Blockchain immutability advantages
- **Case Study:** Securing farmer data in Kenya's DigiFarm

Module 8: Sustainability and Ethical Sourcing

- Green supply chains
- Verifying organic and fair-trade labels
- Waste reduction through transparency
- Empowering smallholder farmers
- Environmental footprint analysis
- **Case Study:** Provenance blockchain for ethical cocoa

Module 9: Food Fraud Prevention

- Common types of food fraud

- Blockchain as anti-fraud technology
- DNA and origin authentication
- Tamper-proof record systems
- Building trust among consumers
- **Case Study:** Beef fraud detection using blockchain in Australia

Module 10: Blockchain and Certification

- Traceable certification paths
- Real-time audit trails
- Government and NGO integrations
- Digital documentation
- Cross-border certification use
- **Case Study:** Organic certification on the blockchain in EU farms

Module 11: Consumer Trust and Transparency

- Consumer behavior trends
- Digital food labels
- Trust and loyalty in brands
- Social responsibility marketing
- Engagement through transparency
- **Case Study:** Scan-and-see blockchain projects in supermarkets

Module 12: Blockchain in Logistics and Distribution

- Fleet tracking systems
- Inventory management
- Delivery confirmations
- Time-sensitive product monitoring
- Decentralized logistics networks
- **Case Study:** Blockchain for dairy distribution in New Zealand

Module 13: Blockchain Economics and ROI

- Cost-benefit analysis
- Investment considerations
- Blockchain value chain modeling
- Cost reduction potentials
- Return on transparency
- **Case Study:** Cost savings in rice export tracking in Vietnam

Module 14: Legal and Regulatory Frameworks

- International blockchain laws
- Compliance with food safety authorities
- Legal recognition of digital records
- Regulatory sandbox environments
- Cross-jurisdiction challenges
- **Case Study:** FDA blockchain pilot program for food safety

Module 15: Designing a Blockchain Traceability Solution

- Needs assessment
- Stakeholder mapping
- Technical architecture

- Implementation roadmap
- Monitoring and evaluation
- **Case Study:** Full-stack solution for Kenyan maize value chain

Training Methodology

- Interactive lectures with blockchain demos
- Hands-on simulation exercises and tools
- Group-based traceability system design
- Real-life case study analysis and critique
- Expert guest speakers from agri-tech sector
- Blockchain lab for testing and prototype creation

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	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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

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