Training Course on Blockchain Applications in Oil and Gas Supply Chain

Professional Development Training Course Outline

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

Course Introduction

The Oil & Gas industry is under increasing pressure to enhance transparency, reduce operational inefficiencies, and secure transactions across complex global supply chains. Blockchain technology has emerged as a transformative tool capable of revolutionizing supply chain management by improving traceability, real-time data sharing, and smart contract automation. Training Course on Blockchain Applications in Oil & Gas (O&G) Supply Chain is designed to bridge the gap between theory and real-world applications, empowering professionals to deploy blockchain-driven solutions in upstream, midstream, and downstream processes.

With the rapid adoption of digital transformation, blockchain adoption in Oil & Gas is becoming a critical strategy for companies aiming to remain competitive. This hands-on course explores high-impact use cases, regulatory insights, and implementation frameworks tailored specifically to the Oil & Gas supply chain. Whether you're a supply chain strategist, IT professional, or business leader, this course provides the practical tools to lead blockchain initiatives in the energy sector.

Programme Curriculum

Training Course on Blockchain Applications in Oil & Gas (O&G) Supply Chain

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Course Objectives

1. Understand the fundamentals of blockchain technology and its relevance to the energy sector.
2. Explore the structure and flow of the Oil & Gas supply chain with a focus on transparency and traceability.
3. Analyze the value of smart contracts for automated procurement and payment systems.
4. Evaluate decentralized ledger technologies (DLTs) for fraud prevention and auditing.
5. Identify key blockchain platforms (e.g., Ethereum, Hyperledger) suited for industrial deployment.
6. Assess the potential of tokenization of energy assets in upstream and downstream operations.
7. Discover how blockchain enhances asset tracking and logistics in the midstream segment.
8. Review global blockchain regulations and compliance in the Oil & Gas context.
9. Gain knowledge on blockchain consortium models for inter-organizational collaboration.
10. Develop strategic roadmaps for blockchain integration in Oil & Gas companies.
11. Explore sustainability reporting and carbon credit trading through blockchain.
12. Examine real-time inventory and asset management through IoT-blockchain integration.
13. Execute a cost-benefit analysis for blockchain projects within supply chain operations.

Target Audience

1. Supply Chain Managers in the energy industry
2. Operations Executives in upstream, midstream, and downstream
3. IT Professionals seeking blockchain integration skills
4. Procurement Managers in oilfield services
5. Blockchain Developers working in energy applications
6. Risk and Compliance Officers
7. Digital Transformation Consultants
8. Academics and Researchers in blockchain and energy studies

Course Duration: 5 days

Course Modules

Module 1: Introduction to Blockchain in the Energy Sector

- Core concepts of blockchain and DLT

- Types of blockchain: Public vs. Private
- Benefits of blockchain for Oil & Gas
- Global blockchain trends in the energy industry
- Key industry players using blockchain
- **Case Study:** Shell and Vakt blockchain pilot in oil trading

Module 2: Understanding the Oil & Gas Supply Chain

- Breakdown of upstream, midstream, and downstream
- Key inefficiencies in traditional supply chains
- Logistics and warehousing challenges
- Real-time data gaps and silos
- Opportunities for automation and integration
- **Case Study:** ExxonMobil supply chain optimization project

Module 3: Smart Contracts and Procurement Automation

- What are smart contracts and how they work
- Procurement workflows using smart contracts
- Vendor authentication and digital identities
- Automatic invoicing and payments
- Risk reduction through smart contracting
- **Case Study:** BP’s automated procurement via blockchain

Module 4: Asset Tracking and Inventory Management

- Blockchain-enabled IoT sensors
- Real-time asset monitoring and reporting
- Inventory lifecycle management
- Product origin and authenticity tracking
- Cold-chain monitoring in Oil & Gas logistics
- **Case Study:** Chevron’s IoT-blockchain pilot for equipment tracking

Module 5: Blockchain in Energy Trading and Tokenization

- Energy asset tokenization explained
- Peer-to-peer energy trading
- Trading efficiency via decentralized exchanges
- Risk mitigation in volatile markets
- Regulatory implications of energy tokens
- **Case Study:** Equinor’s tokenized trading platform prototype

Module 6: Regulatory Compliance and Data Governance

- Blockchain for regulatory reporting
- GDPR, FERC, and industry compliance requirements
- Data privacy and secure sharing

- Permissioned blockchain for compliance
- Role of auditors and government agencies
- **Case Study:** Repsol’s compliance dashboard on Hyperledger Fabric

Module 7: Consortiums and Collaboration Frameworks

- Benefits of inter-company blockchain networks
- Governance models for consortia
- Shared ledger development best practices
- Examples of blockchain alliances in O&G
- Standardization and data interoperability
- **Case Study:** The Oil & Gas Blockchain Consortium (OGBC)

Module 8: Implementation Strategy and ROI Measurement

- Creating a blockchain readiness checklist
- Integration with legacy systems
- Stakeholder alignment and project phasing
- Budgeting and funding sources
- Measuring KPIs and ROI for blockchain projects
- **Case Study:** TotalEnergies' enterprise blockchain rollout

Training Methodology

- Live instructor-led virtual or in-person workshops
- Hands-on labs with sandbox blockchain environments
- Use case simulations for real-world scenarios
- Peer group discussions and collaborative exercises
- Capstone project for implementation planning
- Knowledge checks, quizzes, and final assessment

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
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