Training Course on Advanced Risk Management for Oil and Gas Projects

Professional Development Training Course Outline

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

Course Introduction

In today's high-stakes oil and gas industry, effective risk management is no longer optional—it's a strategic necessity. As projects grow more complex and capital-intensive, the ability to identify, assess, and mitigate risks can determine the difference between a profitable operation and catastrophic loss. Training Course on Advanced Risk Management for Oil & Gas (O&G) Projects provides professionals with cutting-edge tools, strategies, and real-world case applications to manage uncertainty across all phases of upstream and downstream operations.

Leveraging global risk standards, AI-driven risk tools, and industry-specific methodologies, this course empowers decision-makers to navigate geopolitical, operational, financial, and environmental risks with confidence. By the end of the program, participants will master how to align project risk frameworks with corporate strategy, utilize quantitative and qualitative assessments, and apply real-time decision-making to mitigate high-impact scenarios across the entire project lifecycle.

Programme Curriculum

Training Course on Advanced Risk Management for Oil & Gas (O&G) Projects

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Course Objectives

1. Understand core principles of risk governance in large-scale oil & gas projects
2. Analyze regulatory compliance challenges in global O&G operations
3. Utilize AI-powered risk analytics and decision-support tools
4. Implement ISO 31000 and PMI risk standards for project alignment
5. Evaluate risk-return trade-offs in capital project financing
6. Identify early warning signals and risk indicators in exploration and production
7. Apply quantitative risk modeling techniques such as Monte Carlo simulation
8. Conduct risk-based project scheduling and cost control
9. Develop strategies for contractual risk transfer and insurance
10. Manage cybersecurity and digital transformation risks in O&G
11. Address environmental, social, and governance (ESG) risk factors
12. Improve stakeholder communication for crisis and risk response
13. Apply data-driven risk intelligence for project optimization

Target Audiences

1. Project Managers in Oil & Gas
2. Risk Analysts and Risk Managers
3. HSE (Health, Safety, Environment) Officers
4. Contract and Procurement Managers
5. Regulatory and Compliance Officers
6. Engineers and Technical Team Leads
7. Financial Analysts in Energy Sector
8. Oil & Gas Executives and Investors

Course Duration: 10 days

Course Modules

Module 1: Introduction to Advanced Risk Management in O&G

- Evolution of risk in oil & gas projects
- Types of project risks: strategic, operational, and financial
- Risk appetite vs. risk tolerance
- Mapping the O&G project risk landscape

- Industry standards: ISO 31000, COSO, PMI
- **Case Study:** Deepwater Horizon and lessons in risk oversight

Module 2: Regulatory & Legal Risk Management

- Navigating global regulatory frameworks
- Managing compliance in high-risk jurisdictions
- Environmental permits and liability
- Contractual pitfalls and legal disputes
- Risk transfer via insurance and indemnities
- **Case Study:** Shell Nigeria litigation and regulatory failures

Module 3: Risk Identification Tools & Techniques

- Risk breakdown structures (RBS)
- SWOT, PESTLE, and bow-tie analysis
- Brainstorming, interviews, Delphi method
- Scenario planning and what-if analysis
- Root cause analysis and lessons learned
- **Case Study:** BP risk workshop for Arctic exploration

Module 4: Risk Assessment – Qualitative and Quantitative

- Probability-impact matrix
- Risk prioritization and heat maps
- Sensitivity and scenario analysis
- Decision trees and influence diagrams
- Monte Carlo simulation
- **Case Study:** LNG plant construction delay risk modeling

Module 5: Risk Response & Mitigation Strategies

- Risk avoidance, reduction, sharing, retention
- Developing response plans for critical risks
- Implementing preventive controls
- Cost-benefit analysis of risk responses
- Risk contingency planning
- **Case Study:** Chevron mitigation plan for upstream project

Module 6: Schedule & Cost Risk Management

- Critical path method (CPM) and risks
- Quantitative cost-risk analysis
- Earned Value Management (EVM)
- Integrated cost-schedule risk models
- Buffering and risk reserves
- **Case Study:** Cost risk overrun in mega-refinery project

Module 7: Contractual and Insurance Risk

- Risk clauses in O&G contracts
- Managing subcontractor risk
- Joint venture and partnership risk
- Insurance types: CAR, E&O, D&O
- Negotiating risk allocation
- **Case Study:** ExxonMobil PSC risk-sharing model

Module 8: Political and Country Risk Analysis

- Country risk indices and geopolitical intelligence
- Political risk insurance (PRI)
- Sanctions, trade laws, and embargoes
- Government instability and nationalization risk
- Partnering with local stakeholders
- **Case Study:** Total S.A. project risk in Venezuela

Module 9: HSE and Environmental Risk

- Environmental Impact Assessment (EIA)
- Operational risk in drilling and extraction
- Safety hazard analysis (HAZOP, HAZID)
- Risk communication and public perception
- Emergency response planning
- **Case Study:** Environmental disaster mitigation at Exxon Valdez

Module 10: Cyber and Digital Risk in O&G

- SCADA system vulnerabilities
- Digital twin and IoT risk assessment
- Cybersecurity controls and frameworks (NIST, IEC 62443)
- Data protection and breach response
- OT/IT integration risks
- **Case Study:** Cyberattack on Saudi Aramco’s network

Module 11: Financial and Investment Risk

- Economic risk analysis in CAPEX planning
- Exchange rate and interest rate risk
- Financing options and project viability
- Investment appraisal under uncertainty
- Hedging techniques
- **Case Study:** Risk in LNG investment in Mozambique

Module 12: ESG Risk Integration

- Identifying ESG-related risks

- Social license to operate
- Sustainable project development
- Integrating ESG into risk registers
- Reporting frameworks (GRI, SASB)
- **Case Study:** Equinor's ESG-driven risk decisions in offshore Norway

Module 13: Risk Communication and Culture

- Stakeholder mapping and engagement
- Internal vs. external communication
- Risk culture diagnostics
- Leadership roles in fostering risk-aware culture
- Risk reporting dashboards
- **Case Study:** Shell's enterprise risk communication strategy

Module 14: Data-Driven Risk Intelligence

- Leveraging big data for risk analysis
- Predictive analytics and AI tools
- Data integration from sensors and platforms
- Building real-time risk dashboards
- Decision support systems (DSS)
- **Case Study:** AI-enhanced risk forecasting at BP

Module 15: Building the Risk-Resilient Organization

- Risk maturity models
- Organizational learning and feedback loops
- Building a centralized risk function
- Continuous monitoring and reassessment
- Aligning risk with strategy
- **Case Study:** How TotalEnergies implemented risk governance reforms

Training Methodology

- Interactive workshops and simulations
- Real-world case studies and role-plays
- Industry toolkits and software demonstrations
- Facilitated group discussions and team activities
- Post-course assessment and personalized feedback
- Access to digital learning materials and resource library

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
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

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