



*Training Course:
Advanced Oil & Gas Value Chain Concepts and
Project Stages*

*4 - 8 May 2026
Cape Town (South Africa)
DoubleTree by Hilton Cape Town - Upper Eastside*

Training Course: Advanced Oil & Gas Value Chain Concepts and Project Stages

Training Course code: EN2008 From: 4 - 8 May 2026 Venue: Cape Town (South Africa) - DoubleTree by Hilton Cape Town - Upper Eastside Training Course Fees: 7500 € Euro

Introduction

The Advanced Oil & Gas Value Chain Concepts and Project Stages training program is designed to provide participants with an in-depth understanding of the various stages of the oil and gas industry, from exploration and production to downstream operations. This comprehensive program goes beyond the fundamentals and explores advanced concepts and emerging technologies. Participants will gain valuable insights into project planning, execution, and management, as well as the environmental and regulatory aspects of the industry.

Objectives

1. Deepen participants' knowledge of the oil and gas value chain and its interdependencies.
2. Explore advanced techniques and methodologies for exploration, reservoir evaluation, and drilling operations.
3. Understand midstream operations, including transportation, storage, and LNG operations.
4. Gain insights into downstream operations, including refining, petrochemicals, and value-added activities.
5. Enhance participants' project management skills and strategies for successful project execution.
6. Develop an understanding of health, safety, and environmental HSE considerations in the oil and gas industry.
7. Explore sustainable practices, energy transition trends, and emerging technologies.
8. Analyze real-world case studies.

Methodologies

1. Classroom lectures: Expert instructors will deliver comprehensive lectures covering each topic area, providing theoretical foundations and practical insights.
2. Case studies: Participants will engage in analyzing real-world case studies to understand industry challenges, best practices, and problem-solving approaches.
3. Group exercises: Collaborative activities and group exercises will be conducted to encourage participant interaction, promote teamwork, and enhance problem-solving skills.
4. Interactive discussions: Open discussions and Q&A sessions will allow participants to share their experiences, ask questions, and engage in thought-provoking conversations.

Target Audience

1. Professionals working in the oil and gas industry who want to expand their knowledge beyond the basics and gain advanced insights into the value chain and project stages.
2. Engineers, geologists, and technical staff involved in exploration, production, refining, petrochemicals, or

- project management.
3. Managers and decision-makers seeking to enhance their understanding of the industry's complexities, emerging trends, and best practices.
 4. Government officials and regulators responsible for overseeing the oil and gas sector.
 5. Consultants and analysts engaged in providing advisory services to the oil and gas industry.
 6. Students and researchers interested in deepening their understanding of the oil and gas value chain and project stages.

Training program outline

Day 1: Fundamentals of the Oil & Gas Industry

Session 1: Introduction to the Oil & Gas Industry

- Overview of the oil and gas value chain
- Key sectors and their interdependencies
- Market dynamics and industry trends
- Major challenges and opportunities

Session 2: Exploration and Reservoir Evaluation

- Exploration techniques and strategies
- Seismic data acquisition and interpretation
- Reservoir characterization and evaluation methods
- Resource estimation and reserves classification

Session 3: Drilling and Well Operations

- Drilling rig types and components
- Well-planning and design.
- Drilling operations and techniques
- Well completion and production optimization.

Day 2: Midstream Operations and Infrastructure

Session 4: Transportation and Storage

- Overview of midstream operations
- Pipeline transportation systems
- Tank farms and storage terminals
- Transportation logistics and optimization

Session 5: Natural Gas Processing and LNG Operations

- Gas processing and treatment facilities
- Gas dehydration, sweetening, and compression

- Liquefied Natural Gas LNG value chain.
- LNG production, storage, and regasification

Session 6: Refining and Petrochemicals

- Refining processes and units
- Crude oil distillation and product separation
- Conversion processes cracking, reforming, etc.
- Petrochemical industry and product streams

Day 3: Downstream Operations and Project Management

Session 7: Downstream Value-Added Activities

- Product blending and quality control
- Marketing, distribution, and retail operations
- Refinery-petrochemical integration
- Downstream optimization and profitability

Session 8: Project Planning and Execution

- Project management principles and methodologies
- Project planning, scheduling, and budgeting
- Contracting strategies and procurement management
- Project risk assessment and mitigation

Day 4: Health, Safety, and Environmental Management

Session 9: Health, Safety, and Environmental HSE Considerations

- HSE regulations and industry standards
- Hazard identification and risk assessment
- Incident prevention, response, and emergency preparedness
- Environmental sustainability and social responsibility

Session 10: Sustainable Operations and Energy Transition

- Energy transition and decarbonization trends
- Renewable energy integration in the oil and gas industry
- Carbon capture, utilization, and storage CCUS

Day 5: Advanced Topics and Industry Outlook

Session 11: Advanced Concepts in Reservoir Management

- Enhanced oil recovery EOR techniques

- Reservoir simulation and optimization
- Integrated asset modeling and production forecasting
- Reservoir management strategies for mature fields

Session 12: Emerging Technologies and Future Trends

- Digitalization and automation in the oil and gas industry
- Artificial intelligence AI and machine learning applications
- Robotics and autonomous systems
- Advanced materials and nanotechnology in oil and gas

Session 14: Wrap-up and Final Discussion

- Review of key concepts and takeaways
- Open forum for participant questions and discussions
- Future outlook for the oil and gas industry
- Course evaluation and feedback

Registration form on the Training Course: Advanced Oil & Gas Value Chain Concepts and Project Stages

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