



*Training Course:
New Technologies in Production Management*

*22 - 26 December 2025
Madrid (Spain)
Pestana CR7 Gran Vía*

Training Course: New Technologies in Production Management

Training Course code: SC235650 From: 22 - 26 December 2025 Venue: Madrid (Spain) - Pestana CR7 Gran Vía Training Course Fees: 6000 € Euro

Introduction:

The oil and gas industry is witnessing a transformative era driven by technological advancements in drilling, engineering, and operations. This training program is designed to provide participants with an in-depth understanding of cutting-edge technologies, including advanced drilling techniques, digital twins, predictive analytics, and automation, that are reshaping the oil and gas landscape. By exploring these innovations, participants will learn how to optimize exploration, enhance operational efficiency, and address sustainability challenges in this dynamic sector.

Target Audience:

- Drilling engineers and operations supervisors
- Petroleum engineers and field managers
- Project managers in oil and gas operations
- Maintenance and reliability engineers in oil and gas facilities
- Professionals involved in exploration and production E&P planning
- Anyone interested in integrating advanced technologies into oil and gas workflows

Objectives:

- Understand the role of new technologies in optimizing oil and gas operations.
- Explore advancements in drilling, engineering, and production-specific applications like digital twins and AI-driven analytics.
- Learn strategies for integrating IoT, robotics, and data-driven tools into oil and gas workflows.
- Gain hands-on experience with digital tools for predictive maintenance, reservoir modeling, and operational efficiency.
- Develop a practical roadmap for implementing technologies that align with organizational goals in the oil and gas sector.

Outlines:

Day 1:

Introduction to Emerging Technologies in Oil and Gas Operations

- Overview of technological trends in oil and gas: Industry 4.0 in the energy sector
- Advanced drilling technologies: Directional drilling and automation
- Role of smart sensors and real-time monitoring in upstream and downstream processes
- Case studies: Successful technology integration in oil and gas projects
- Group discussion: Identifying sector-specific challenges and opportunities

Day 2:

IoT and Data Analytics in Oil and Gas

- Applications of IoT in drilling, pipeline monitoring, and asset management
- Real-time data collection and processing for reservoir analysis
- Introduction to data analytics: Enhancing production forecasting and resource management
- Hands-on exercise: Analyzing IoT-enabled data for operational insights
- Workshop: Developing a data-driven approach to predictive maintenance

Day 3:

Artificial Intelligence AI and Machine Learning in Oil and Gas

- AI-driven optimization in drilling and reservoir engineering
- Applications of machine learning in seismic data interpretation and production forecasting
- Quality control and defect detection using AI in oil and gas facilities
- Case studies: AI in predictive maintenance and energy efficiency
- Interactive session: Identifying AI applications in participants' operational environments

Day 4:

Advanced Automation and Robotics in Oil and Gas

- Innovations in robotic drilling systems and pipeline inspection
- Exploring autonomous underwater vehicles AUVs for offshore operations
- Integration of collaborative robots cobots in facility maintenance

- Hands-on activity: Simulating robotic applications in oil and gas tasks
- Group project: Designing an automation strategy for a drilling operation

Day 5:

Technology Integration and Management in Oil and Gas

- Developing a roadmap for technology integration in upstream and downstream processes
- Overcoming challenges in technology adoption: Change management in oil and gas
- Cybersecurity measures and data protection in the oil and gas ecosystem
- Measuring ROI and operational impact of new technologies
- Final workshop: Crafting a customized technology adoption and implementation plan

Registration form on the Training Course: New Technologies in Production Management

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