Optimizing Oil and Gas Inventory and Supply Chain Management Training Course

07 - 11 Dec 2026

Lisbon

4500 € (Per Person)

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Course Introduction / Overview:

The global oil and gas industry operates within an exceptionally volatile and complex environment, making supply chain management and inventory control absolutely critical for operational efficiency and profitability. This intensive training course is designed to equip professionals with the advanced strategies needed to navigate the unique challenges of the upstream, midstream, and downstream sectors, focusing heavily on materials management and logistics. The energy sector's inherent risks, coupled with geographical remoteness and regulatory compliance, demand a specialized approach to procurement, warehousing, and materials management that goes beyond generic supply chain models. Participants will learn how to optimize MRO inventory (Maintenance, Repair, and Operating), minimize stock-outs that cause costly downtime, and leverage technology for real-time visibility. The content is grounded in academic rigor, drawing on concepts discussed in seminal works like Optimal Supply Chain Management in Oil, Gas, and Power Generation by David Jacoby. This book, by David Jacoby, emphasizes the need for sector-specific financial and risk management tools in the supply chain context. Through practical frameworks and in-depth case studies, BIG BEN Training Center commits to providing the expertise to transform a company's supply chain from a necessary cost center into a strategic source of competitive advantage. We focus on building resilient, cost-effective, and compliant supply chains, ensuring every participant can implement best-practice solutions immediately upon returning to their organization. This includes mastering demand forecasting, lead time management, and the crucial elements of third-party logistics (3PL) for heavy equipment and critical spares.

Target Audience / This training course is suitable for:

- Supply Chain Managers and Directors.
- Procurement and Sourcing Specialists.
- Inventory Control and Materials Managers.
- Logistics and Distribution Coordinators.
- Financial Analysts focused on Capital Expenditure (CAPEX) and Operating Expenditure (OPEX).
- Operations and Production Planners.
- Warehouse and Distribution Center Supervisors.

Target Sectors and Industries:

- Upstream Oil and Gas (Exploration and Production).
- Midstream Oil and Gas (Transportation, Pipelines, and Storage).
- Downstream Oil and Gas (Refining and Petrochemicals).
- Oilfield Services and Equipment Manufacturing.
- Drilling Contractors and Service Companies.
- Maritime and Energy Logistics Firms.
- Government Agencies, National Oil Companies, and Regulatory Bodies focused on energy supply and reserves management.

Target Organizations Departments:

- Supply Chain and Logistics Department.
- Procurement and Contracts Department.
- Materials and Inventory Management Department.
- Finance and Cost Control Department.
- Operations and Production Department.
- Maintenance, Repair, and Overhaul (MRO) Department.
- Project Management and Capital Projects Department.

Course Offerings:

By the end of this course, the participants will have able to:

- Design and implement a robust oil and gas supply chain strategy aligned with corporate financial objectives.
- Master advanced techniques for inventory optimization and MRO materials management to reduce capital tied up in stock.
- Utilize effective demand forecasting models to predict consumption of critical spares and long-lead items, minimizing stock-outs.
- Enhance procurement processes through strategic sourcing, supplier relationship management, and effective contract negotiation.
- Apply risk management frameworks to mitigate geopolitical, environmental, and operational threats within the global logistics network.
- Optimize transportation and third-party logistics (3PL) management for moving heavy equipment and hazardous materials.
- Implement key performance indicators (KPIs) and modern technology, like digital inventory systems, to improve supply chain visibility and control.

Course Methodology:

This course adopts a highly interactive and practical training methodology, ensuring that all concepts of oil and gas supply chain and inventory management are immediately transferable to the workplace. The approach is a blend of academic theory and real-world application, driven by current industry best practices and lessons learned. Instructional methods will include detailed, instructor-led presentations to cover core principles like inventory control, demand planning, and procurement excellence. Crucially, the program heavily features extensive case studies drawn from actual upstream and downstream operations, allowing participants to apply theoretical models to solve complex logistics and materials management problems. Teamwork and group exercises will focus on developing collaborative problem-solving skills, particularly around multi-national and cross-functional supply chain issues, such as aligning maintenance schedules with spares inventory. We utilize interactive workshops and simulation tools to model the financial impact of different supply chain risk management and optimization decisions. Throughout the course, a continuous feedback loop is maintained through Q&A sessions, peer review of solutions, and personalized instructor guidance. BIG BEN Training Center uses this method to ensure participants not only grasp the concepts but also master the skills required for implementing resilient and cost-effective oil and gas logistics strategies.

Course Agenda (Course Units):

Unit One: Strategic Supply Chain Foundations and Risk Management

- Setting the Strategic Context for Oil and Gas Operations.
- Introduction to the Upstream, Midstream, and Downstream Supply Chain Value Chain.
- Aligning Supply Chain Strategy with Corporate Financial and Operational Goals.
- Assessing Global and Regional Geopolitical Risks in Oil and Gas Logistics.
- Developing Supply Chain Resilience and Business Continuity Planning.
- Key Performance Indicators (KPIs) for Supply Chain and Inventory Management.
- Implementing Digital Transformation for Supply Chain Visibility.

Unit Two: Advanced Inventory and Materials Management

- Demand Forecasting and Planning for Critical Materials and Spares.
- Classifying MRO Inventory and Critical Spares using ABC and VED Analysis.
- Determining Optimal Stocking Policies and Reorder Points (Min/Max, EOQ).
- Techniques for Managing Slow-Moving and Obsolete Inventory (SLOB).
- Maintaining High Inventory Accuracy through Cycle Counting and Auditing Protocols.
- Establishing Effective Warehousing and Storage Layouts for Hazardous Materials.
- Managing Inventory across Remote Sites, Platforms, and Drilling Rigs.

Unit Three: Procurement and Sourcing Excellence

- Strategic Sourcing and Supplier Relationship Management.
- Global Sourcing and Procurement in Volatile Commodity Markets.
- Developing and Negotiating Complex Oil and Gas Contracts and Service Agreements.
- Supplier Vetting, Auditing, and Performance Management (SRM).
- Techniques for Cost Control and Value Analysis in High-Value Capital Expenditure CAPEX Procurement.
- Managing Long-Lead Item Procurement and Expediting Processes.
- Implementing E-Procurement and Digital Platforms for Sourcing Efficiency.

Unit Four: Logistics, Transportation, and Trade Compliance

- Multi-Modal Logistics and Transportation Management in the Energy Sector.
- Optimizing Transportation Modes: Sea, Air, Road, and Pipeline Logistics.
- Managing Third-Party Logistics (3PL) Providers and Service Level Agreements (SLAs).
- Handling Import/Export Regulations, Customs Procedures, and Trade Compliance.
- Specialized Transport of Heavy Equipment and Hazardous Materials.
- Effective Fleet Management and Utilization for Onshore and Offshore Operations.
- Incorporating Safety, Health, and Environment (HSE) Standards into Logistics Operations.

Unit Five: Financial Performance and Digital Integration

- Measuring and Enhancing Supply Chain Financial Performance.
- Analyzing the Total Cost of Ownership (TCO) for Major Assets and Inventory.
- Linking Inventory Management to Working Capital and Cash Flow Optimization.
- Leveraging ERP (Enterprise Resource Planning) Systems for Materials and SCM Integration.
- Exploring Emerging Technologies: IoT, AI, and Blockchain in the Oil and Gas Supply Chain.
- Conducting a Comprehensive Supply Chain Performance Audit and Gap Analysis.
- Developing an Action Plan for Continuous Supply Chain Improvement and Cost Reduction.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How does a zero-tolerance policy for costly rig downtime fundamentally reshape the economic order quantity calculation and safety stock allocation for critical long-lead spares in an upstream deep water drilling operation?

What unique qualities does this course offer compared to other courses?

This Optimizing Oil and Gas Inventory and Supply Chain Management Training Course stands apart because it moves beyond generic supply chain principles to tackle the specific, high-stakes complexities of the energy industry. Most courses cover basic inventory control, but this program dives deep into managing MRO inventory for billion-dollar assets like offshore platforms and refinery units, where a single stock-out can cost hundreds of thousands per day in lost production. We emphasize sector-specific challenges, such as navigating complex geopolitical risks that affect global logistics and ensuring strict compliance with international standards for hazardous materials transport. The curriculum is uniquely structured to integrate financial performance metrics, explicitly linking robust inventory optimization strategies to working capital reduction and overall financial health (CAPEX/OPEX). Instead of just discussing supply chain software, we focus on the actionable insights derived from data, enabling participants to master demand forecasting and apply strategic sourcing to volatile markets. The practical application is secured through extensive, real-world case studies focusing on upstream materials flow and downstream product distribution, giving participants a clear, implementable road map for achieving world-class supply chain performance and operational resilience within the oil and gas industry.