Oil and Gas Project and Shutdown Turnaround Management Training Course

23 - 27 Nov 2026

Cape town

4600 € (Per Person)

Ref: #PMP9296_280091

Course Introduction / Overview:

The oil and gas industry is characterized by high-stakes, capital-intensive projects and mission-critical shutdown and turnaround (STO) events where time and budget overruns can have monumental consequences. This course provides a comprehensive framework for mastering the dual disciplines of long-term project management and short-cycle, high-intensity turnaround management. Drawing on principles outlined by project management authorities like Harold Kerzner in his work "Project Management: A Systems Approach to Planning, Scheduling, and Controlling," this program delves into the complete project lifecycle, from initial feasibility and FEED to execution, commissioning, and closeout. BIG BEN Training Center has designed this training to equip professionals with the strategic tools needed for effective scope definition, risk mitigation, and contractor management. Participants will explore the unique challenges of STO events, focusing on meticulous planning, scheduling, and execution strategies to minimize downtime and maximize asset reliability, ensuring a safe and efficient return to operation. This is an essential program for achieving operational excellence and driving project success in the demanding energy sector.

Target Audience / This training course is suitable for:

- Project Managers and Project Engineers.
- Shutdown and Turnaround Managers and Planners.
- Maintenance and Reliability Engineers and Supervisors.
- Operations Managers and Team Leaders.
- Construction Managers and Supervisors.
- Cost Control and Planning Engineers.
- Procurement and Contract Specialists.
- HSE Managers and Advisors.
- Discipline Engineers (Mechanical, Electrical, Instrumentation).
- Project Management Office (PMO) staff.

Target Sectors and Industries:

- Upstream Oil and Gas (Exploration and Production).
- Midstream Oil and Gas (Pipeline, Storage, and Transportation).
- Downstream Oil and Gas (Refining and Petrochemicals).
- LNG and Gas Processing Plants.
- Offshore and Onshore Facilities Operators.
- Engineering, Procurement, and Construction (EPC) Companies.
- Governmental bodies and national oil companies.
- Energy sector service and equipment providers.

Target Organizations Departments:

- Project Management.
- Engineering and Design.
- Operations and Production.
- Maintenance and Asset Integrity.
- Health, Safety, and Environment (HSE).
- Procurement and Supply Chain Management.
- Finance and Cost Control.
- Contracts and Commercial Departments.
- Quality Assurance and Quality Control (QA/QC).

Course Offerings:

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

- Develop a robust project management plan tailored for oil and gas capital projects.
- Master the key phases of the project lifecycle from initiation to closeout.
- Implement effective scope management and work breakdown structure (WBS) techniques.
- Formulate comprehensive risk management strategies for complex energy projects.
- Lead the planning and scheduling of shutdown, turnaround, and outage (STO) events.
- Optimize resource allocation and manage logistics for efficient turnaround execution.
- Enhance contractor management and procurement processes for project success.
- Apply advanced cost estimation and control methods to prevent budget overruns.
- Ensure safety and quality compliance throughout all project and turnaround phases.
- Conduct effective post-turnaround reviews and implement lessons learned for continuous improvement.

Course Methodology:

This training course employs a dynamic and interactive learning methodology to ensure participants gain practical and applicable skills. The approach at BIG BEN Training Center is centered on adult learning principles, blending expert-led instruction with hands-on application. Sessions will feature detailed presentations on core concepts of project and turnaround management, supported by real-world case studies from major oil and gas projects and STO events globally. Participants will engage in collaborative group exercises, such as developing a risk register for a mock project, creating a critical path schedule for a plant shutdown, and simulating contractor negotiation scenarios. Interactive workshops and brainstorming sessions will encourage the sharing of experiences and challenges, fostering a rich learning environment. The facilitator will provide continuous feedback and guide discussions to connect theoretical frameworks with the practical realities faced by professionals in the field. This blended approach ensures that participants leave with not only knowledge but also the confidence to apply these strategies in their own work environments.

Course Agenda (Course Units):

Unit One: Fundamentals of Oil and Gas Project Management

- Introduction to the Oil and Gas Industry Project Environment.
- The Project Management Lifecycle and Key Phases (Initiate, Plan, Execute, Control, Close).
- Understanding Project Management Body of Knowledge (PMBOK) principles.
- Key Stakeholders and Their Roles in Oil and Gas Projects.
- Defining Project Scope, Objectives, and Success Criteria.
- Introduction to Shutdowns, Turnarounds, and Outages (STO).
- The Strategic Importance of Effective Turnaround Management.

Unit Two: Project and Turnaround Planning and Scheduling

- Developing the Work Breakdown Structure (WBS) for Projects and STOs.
- Techniques for Accurate Cost Estimation and Budgeting.
- Project Scheduling using Critical Path Method (CPM) and Gantt Charts.
- Resource Planning and Allocation for Manpower and Equipment.
- Developing the Turnaround Scope of Work and Worklist.
- Long-Lead Item Procurement and Logistics Planning.
- Turnaround Readiness Assessment and Gatekeeping Processes.

Unit Three: Risk, Safety, and Quality Management

- Identifying and Assessing Risks in Oil and Gas Projects.
- Developing Risk Response and Mitigation Strategies.
- Integrating Health, Safety, and Environment (HSE) into Project Planning.
- Permit to Work Systems and Job Safety Analysis (JSA) for STOs.
- Quality Assurance and Quality Control (QA/QC) in Project Execution.
- Managing Change and Scope Creep Effectively.
- Contingency Planning for Unexpected Events and Emergencies.

Unit Four: Execution, Monitoring, and Control

- Project Execution Strategies and Contractor Management.
- Monitoring Project Progress and Performance with KPIs.
- Cost Control, Earned Value Management (EVM), and Forecasting.
- Managing the Shutdown Execution Phase: The Control Center.
- Daily Progress Reporting and Coordination Meetings during Turnarounds.
- Effective Communication and Stakeholder Engagement Strategies.
- Resolving Conflicts and Managing Project Constraints.

Unit Five: Project Closeout and Turnaround Optimization

- Managing Project Commissioning, Startup, and Handover.
- The Critical Steps of Turnaround De-mobilization and System Restart.
- Conducting a Formal Project and Turnaround Closeout.
- Capturing and Analyzing Lessons Learned for Future Improvements.
- Final Reporting and Performance Benchmarking.
- Strategies for Continuous Improvement in STO Performance.
- The Future of Project Management in the Energy Transition.

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:

Considering the increasing pressure for decarbonization, how can traditional shutdown and turnaround management principles be adapted to support energy transition projects within the oil and gas sector?

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

This course is uniquely designed to address the two distinct yet interconnected pillars of success in the oil and gas industry: long-term capital project management and short-term, high-intensity shutdown and turnaround (STO) management. Unlike programs that focus on one area, this training provides a holistic, integrated perspective, recognizing that the skills for managing a multi-year construction project differ significantly from those needed for a 30-day plant overhaul, yet they often reside within the same teams. The curriculum moves beyond generic project management theory to tackle industry-specific challenges, such as managing complex EPC contracts, navigating stringent HSE regulations, and optimizing logistics in remote or offshore environments. Our methodology emphasizes practical application through case studies drawn directly from upstream, midstream, and downstream operations. Participants will not just learn what a work breakdown structure is; they will build one for a refinery unit turnaround. This focus on applied learning ensures that attendees gain actionable strategies and a deep, nuanced understanding of how to drive both project and operational excellence in the demanding energy sector.