Strategic Shutdown, Turnaround, and Outage Management Training Course



23 - 27 Nov 2026

Kuala Lumpur

5200 € (Per Person)

Ref: #PRM5124_125888

Course Introduction / Overview:

This intensive training course provides a comprehensive framework for mastering the complex processes of plant shutdowns, turnarounds, and outages (STO). These events are among the most critical and costly undertakings for any industrial facility, demanding meticulous planning, precise execution, and strategic oversight to succeed. This program, offered by BIG BEN Training Center, moves beyond basic project management to address the unique challenges inherent in STO events. We will explore the entire STO lifecycle, from initial concept and scope definition to post-event analysis and continuous improvement. Drawing upon industry best practices and the foundational principles articulated by experts like Tom Lenahan in his seminal work, "The Shutdown and Turnaround Management Process," this course equips participants with the strategic thinking and tactical skills necessary to minimize downtime, control costs, and enhance safety. Participants will learn to navigate the intricate web of logistics, contractor management, risk mitigation, and stakeholder communication that defines successful STO management, ensuring their organization's assets are returned to service safely, on schedule, and within budget. This is a definitive A-to-Z guide for professionals seeking to lead and excel in high-stakes industrial maintenance projects.

Target Audience / This training course is suitable for:

- Shutdown and Turnaround Managers.
- Project Managers and Engineers.
- Maintenance Planners and Schedulers.
- Operations and Production Supervisors.
- Plant and Facility Managers.
- Reliability and Maintenance Engineers.
- Health, Safety, and Environment (HSE) Professionals.
- Contract and Procurement Managers.
- Cost Control and Estimation Engineers.
- Senior Technicians and Team Leaders.

Target Sectors and Industries:

- Oil and Gas (Upstream, Midstream, and Downstream).
- Petrochemical and Chemical Processing.
- Power Generation and Utilities.
- Heavy Manufacturing and Industrial Plants.
- Mining and Mineral Processing.
- Pharmaceuticals and Biotechnology.
- Pulp and Paper Manufacturing.
- Governmental agencies and public sector utilities.
- Aerospace and Defense Manufacturing.

Target Organizations Departments:

- Maintenance and Reliability.
- Project Management Office (PMO).
- Plant Operations.
- Engineering and Technical Services.
- Health, Safety, and Environment (HSE).
- Procurement and Supply Chain Management.
- Finance and Cost Control.
- Quality Assurance and Quality Control (QA/QC).
- Capital Projects.

Course Offerings:

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

- Develop a comprehensive and integrated STO management plan.
- Define and control the scope of work to prevent scope creep.
- Master advanced scheduling techniques, including the Critical Path Method (CPM).
- Create accurate cost estimates and implement robust budget control systems.
- Implement effective risk assessment and mitigation strategies for STO events.
- Manage contractors and vendors effectively from selection to performance evaluation.
- Ensure the highest standards of safety and quality throughout the STO lifecycle.
- Lead multi-disciplinary teams and manage stakeholder communications.
- Conduct thorough post-STO reviews to capture lessons learned and drive continuous improvement.
- Optimize STO performance by leveraging key performance indicators (KPIs).

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and engaging, ensuring that participants can immediately apply the learned concepts in their professional roles. This course moves beyond traditional lectures to create a dynamic learning environment. We utilize a blended approach that includes expert-led presentations on core principles, in-depth case studies of real-world shutdown and turnaround projects, and collaborative group workshops where participants can tackle complex planning and execution scenarios. Interactive sessions, team-based problem-solving exercises, and facilitated discussions are central to the learning process, encouraging the exchange of ideas and experiences among peers from various industries. Participants will work on a simulated STO project throughout the course, applying tools and techniques at each stage of the lifecycle, from scoping and planning to execution and close-out. This hands-on approach is reinforced by continuous feedback from the instructor, allowing for a deeper understanding of STO management best practices and fostering the critical thinking skills needed to lead successful projects.

Course Agenda (Course Units):

Unit One: Foundations of STO Management

- Introduction to Shutdowns, Turnarounds, and Outages (STO).
- Defining the differences and strategic importance of each event type.
- The complete STO management lifecycle and its five key phases.
- Identifying key stakeholders and establishing a communication plan.
- Understanding the primary causes of STO failure and success factors.
- Establishing the core STO management team and defining roles.
- The strategic link between STO events and overall business objectives.

Unit Two: Strategic Planning and Scope Management

- The STO planning pyramid and long-term strategic preparation.
- Developing a detailed work list and scope definition process.
- Techniques for work breakdown structure (WBS) development.
- Managing and controlling scope creep throughout the project.
- Integrating capital projects with turnaround maintenance work.
- Early procurement planning for long-lead items and critical equipment.
- Developing the comprehensive STO premise and philosophy document.

Unit Three: Detailed Scheduling and Cost Management

- Principles of STO scheduling and planning horizons.
- Application of Critical Path Method (CPM) for STO events.
- Resource loading, leveling, and allocation strategies.
- Developing detailed cost estimates and funding proposals.
- Implementing robust budget tracking and cost control systems.
- Managing contingency funds and financial risk.
- Utilizing software tools for integrated scheduling and cost management.

Unit Four: Execution, Safety, and Quality Management

- Conducting STO readiness reviews and pre-shutdown activities.
- Effective contractor selection and management strategies.
- Implementing a world-class Health, Safety, and Environment (HSE) plan.
- Logistics management for personnel, materials, and equipment.
- Quality assurance and quality control (QA/QC) during execution.
- Daily progress tracking, reporting, and coordination meetings.
- Managing emergent work and on-the-fly problem-solving.

Unit Five: Shutdown Close-Out and Continuous Improvement

- Managing the transition from shutdown to start-up and normal operations.
- Formal project close-out procedures and system handover.
- Conducting a thorough post-STO critique and analysis.
- Developing and documenting a comprehensive lesson learned report.
- Analyzing key performance indicators (KPIs) and project metrics.
- Archiving project data for future planning cycles.
- Integrating lessons learned into the next STO strategy.

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 immense pressure and complexity of a major plant turnaround, how can leadership balance the competing priorities of schedule, budget, safety, and quality without compromising any single element?

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

This course distinguishes itself by adopting a holistic and strategic perspective on STO management, moving beyond the mere mechanics of project scheduling and execution. While many programs focus narrowly on tactical tools, this training emphasizes the integration of STO events with broader business objectives, teaching participants how to build a compelling business case and secure organizational alignment. Its core strength lies in its focus on the entire STO lifecycle, from long-range strategic planning years in advance to the critical post-event analysis that fuels continuous improvement. The curriculum is built upon a foundation of proven industry best practices and academic rigor, providing a structured methodology that is both robust and adaptable. Rather than just presenting information, the course fosters critical thinking through complex case studies and interactive simulations that mirror the high-stakes decision-making environment of a real turnaround. It cultivates leadership skills, focusing on stakeholder management, team dynamics, and effective communication, which are often the true determinants of STO success or failure. Participants leave not just with a toolkit, but with a strategic mindset to lead these critical events with confidence and precision.