Advanced Shutdown, Turnaround, and Outage Management Training Course



21 - 25 Dec 2026

Kuala Lumpur

5200 € (Per Person)

Ref: #INM9670_111309

Course Introduction / Overview:

Effectively managing shutdowns, turnarounds, and outages (STO) is one of the most critical and financially significant challenges faced by asset-intensive industries. These complex events, if poorly planned or executed, can lead to catastrophic budget overruns, extended downtime, and significant safety risks. This comprehensive program is designed to equip participants with a systematic and integrated framework for managing the entire STO lifecycle, from strategic planning to post-event analysis. Drawing upon industry best practices and the principles outlined by experts like Tom Lenahan in his seminal work, "Turnaround, Shutdown and Outage Management," this course moves beyond basic project management. It delves into the strategic nuances of scope definition, risk mitigation, contractor management, and cost control. At BIG BEN Training Center, we provide a structured learning path that transforms STO events from a necessary evil into a strategic opportunity for plant improvement and enhanced reliability. Participants will gain the advanced skills needed to lead these high-stakes projects, ensuring they are completed safely, on time, and within budget, thereby maximizing asset performance and operational excellence. This course is the definitive guide for professionals seeking to master the art and science of STO management.

Target Audience / This training course is suitable for:

- Shutdown and Turnaround Managers.
- Project Managers and Engineers.
- Maintenance Planners and Schedulers.
- Operations and Production Managers.
- Plant Managers and Supervisors.
- Reliability and Maintenance Engineers.
- HSE Managers and Safety Professionals.
- Procurement and Contract Managers.
- Cost Control and Estimation Engineers.

Target Sectors and Industries:

- Oil and Gas.
- Petrochemicals and Refining.
- Power Generation and Utilities.
- Heavy Manufacturing and Industrial Plants.
- Mining and Mineral Processing.
- Pharmaceuticals and Chemical Processing.
- Pulp and Paper Manufacturing.
- Governmental bodies and public sector utilities.

Target Organizations Departments:

- Maintenance and Reliability.
- Operations Management.
- Project Management Office (PMO).
- Engineering and Technical Services.
- Health, Safety, and Environment (HSE).
- Procurement and Supply Chain Management.
- Finance and Cost Control.
- Planning and Scheduling.

Course Offerings:

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

- Develop a comprehensive STO management strategy from initiation to closeout.
- Master advanced techniques for scope definition, work breakdown, and estimation.
- Implement robust planning and scheduling methodologies using Critical Path Method (CPM).
- Optimize resource allocation, including labor, materials, and equipment.
- Execute effective contractor selection and performance management strategies.
- Integrate safety and quality management systems into every phase of the STO event.
- Apply advanced risk identification, assessment, and mitigation techniques.
- Control costs and manage budgets effectively throughout the turnaround lifecycle.
- Conduct thorough post-turnaround reviews to capture lessons learned and drive continuous improvement.
- Lead and communicate effectively with multidisciplinary teams and stakeholders.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring that participants can immediately apply the learned concepts in their work environments. We believe that adult learning is most effective when it combines theoretical knowledge with hands-on application. Therefore, this course utilizes a blended approach that includes expert-led presentations, in-depth case studies of real-world shutdown and turnaround projects, and interactive group discussions. Participants will engage in practical workshops and team-based exercises focused on critical STO processes such as scope development, risk assessment, and schedule optimization. These activities are designed to simulate the challenges faced during actual STO events, fostering problem-solving skills and collaborative decision-making. The facilitator will provide continuous feedback and guide participants through complex scenarios, ensuring a deep understanding of the material. The learning environment encourages the sharing of experiences and best practices among participants from various industries, enriching the overall educational experience and creating a powerful network of STO professionals.

Course Agenda (Course Units):

Unit One: Foundations of STO Management

- Introduction to Shutdowns, Turnarounds, and Outages (STO).
- The strategic importance of STO events for business performance.
- Understanding the complete STO management lifecycle.
- Key terminology and definitions in turnaround management.
- Defining roles and responsibilities of the core STO team.
- Identifying key success factors and common failure points.
- Establishing the business case and setting clear objectives for the STO.

Unit Two: Strategic Planning and Scope Management

- The five phases of a successful turnaround management model.
- Developing the STO premise and strategic framework.
- Techniques for effective scope identification and collection.
- The process of scope validation, challenge, and optimization.
- Creating a detailed Work Breakdown Structure (WBS).
- Developing work packages and detailed job plans.
- Introduction to cost estimation and budget development.

Unit Three: Detailed Scheduling and Resource Management

- Principles of network-based scheduling for STO events.
- Application of the Critical Path Method (CPM) in turnaround planning.
- Techniques for schedule optimization and resource leveling.
- Developing a comprehensive resource plan for labor, materials, and equipment.
- Strategies for effective contractor selection and pre-qualification.
- Managing contracts and commercial terms for STO services.
- Logistics and materials management planning for turnarounds.

Unit Four: Execution, Safety, and Quality Control

- Managing the shutdown and plant decontamination phase.
- Effective execution management and daily progress tracking.
- Implementing a robust Health, Safety, and Environment (HSE) management plan.
- Permit-to-work systems and energy isolation procedures.
- Quality assurance and quality control during execution.
- Communication strategies and stakeholder management during the STO.
- Managing emergent work and scope changes effectively.

Unit Five: Post-STO Analysis and Continuous Improvement

- Managing the plant startup and commissioning phase.
- Conducting a systematic post-turnaround performance analysis.
- Key Performance Indicators (KPIs) for measuring STO success.
- The process of capturing and documenting lessons learned.
- Developing a final report and communicating results to stakeholders.
- Creating a continuous improvement plan for future STO events.
- Knowledge management and building an organizational STO capability.

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 can organizations shift from a reactive, fire-fighting approach to STO events towards a proactive, strategically-driven model that generates long-term value and competitive advantage?

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

This course distinguishes itself by offering a holistic, end-to-end perspective on shutdown, turnaround, and outage management, moving far beyond a singular focus on planning or execution. While many programs teach the technical aspects of scheduling or cost control, this training integrates these elements within a broader strategic framework, emphasizing how STO events align with and drive overall business objectives. Its unique quality lies in its focus on the leadership and decision-making skills required to navigate the complexities of high-stakes turnarounds. We utilize a case-study-driven approach, analyzing both successful and failed STOs from various industries to extract practical, actionable insights rather than just theoretical knowledge. The curriculum is designed to foster a mindset of continuous improvement, teaching participants not only how to manage a single event but how to build a robust, learning-oriented STO management system within their organization. By focusing on risk mitigation, stakeholder communication, and post-event knowledge capture, the course equips professionals to transform costly necessities into value-adding opportunities for enhancing plant reliability and performance.