COURSE OVERVIEW RE0050

Turnaround Best Practices - Planning, Scheduling and Management of Shutdowns

Course Title
Turnaround Best Practices - Planning, Scheduling and Management of Shutdowns

Course Date/Venue
February 01-05, 2026/TBA Meeting Room, Dusit D2 Salwa, Doha, Qatar

Course Reference
RE0050

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide participants with a detailed and up-to-date overview of Turnaround Best Practices - Planning, Scheduling and Management of Shutdowns. It covers the types of turnarounds, turnaround phases and the differences between project management and turnaround management; the turnaround planning framework and identifying and assessing risks; developing a risk mitigation plan and tools for monitoring risks during execution; the scope identification, scope validation, strategies for avoiding scope creep and managing competing priorities in scope planning; and the resource planning and allocation and work breakdown structure (WBS) development.

Further, the course will also discuss the key components of an effective schedule; the critical path method (CPM) and Gantt charts for turnaround visualization; the tools and methods for accurate cost estimation, benchmarking for realistic estimates and managing estimate uncertainties; the contracting and procurement strategies and key performance indicators (KPIs) for planning; the detailed scheduling techniques, budgeting and cost control and safety management during turnarounds; and establishing QA/QC standards, inspection and testing protocols and managing non-conformance issues.

During this interactive course, participants will learn the management of change during execution; evaluating the impact of changes on scope and schedule and avoiding decision paralysis during execution; the real-time monitoring and reporting, asset handover and commissioning procedures and documentation; conducting a post-mortem analysis, evaluating turnaround success against KPIs and developing a turnaround improvement plan; collecting, storing and analyzing turnaround data; generating comprehensive turnaround reports and utilizing data for future planning; and the financial reconciliation, long-term sustainability post-turnaround and advanced tools and technologies for turnarounds.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on turnaround best practices - planning, scheduling and management of shutdowns
- Identify the types of turnarounds, turnaround phases and the differences between project management and turnaround management
- Discuss turnaround planning framework, integrate organizational strategy and identify key stakeholders and roles
- Identify and assess risks, develop a risk mitigation plan and apply tools for monitoring risks during execution
- Apply scope identification, scope validation, strategies for avoiding scope creep and managing competing priorities in scope planning
- Carryout resource planning and allocation and work breakdown structure (WBS) development
- Identify the key components of an effective schedule and apply critical path method (CPM) and Gantt charts for turnaround visualization
- Apply tools and methods for accurate cost estimation, benchmarking for realistic estimates and strategies for managing estimate uncertainties
- Employ contracting and procurement strategies, communication and stakeholder engagement and key performance indicators (KPIs) for planning
- Apply detailed scheduling techniques, budgeting and cost control and safety management during turnarounds
- Establish QA/QC standards, inspect and test protocols and manage non-conformance issues
- Manage change during execution, evaluate the impact of changes on scope and schedule and avoid decision paralysis during execution
- Apply real-time monitoring and reporting, asset handover and commissioning procedures and documentation
- Conduct a post-mortem analysis, evaluate turnaround success against KPIs and develop a turnaround improvement plan
- Collect, store and analyze turnaround data, generate comprehensive turnaround reports and utilize data for future planning
- Apply financial reconciliation, long-term sustainability post-turnaround and advanced tools and technologies for turnarounds

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of turnaround best practices - planning, scheduling and management of shutdowns for maintenance managers and supervisors, shutdown and turnaround planners and coordinators, project managers and engineers, operations and production managers, health, safety, and environmental (HSE) professionals, inspectors and quality assurance specialists and other technical staff.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US$ 6,000 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours

Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Andrew Ladwig is a **Senior Mechanical & Maintenance Engineer** with over **25 years** of extensive experience within the **Oil & Gas**, **Refinery**, **Petrochemical & Power** industries. His expertise widely covers in the areas of **Maintenance Optimization & Best Practices**, **Process Plant Shutdown & Turnaround**, **Maintenance Auditing & Benchmarking**, **Reliability** Management, **Reliability Centered Maintenance Principles & Application**, **Efficient Shutdowns**, **Machinery Lubrication**, **Maintenance Planning & Scheduling**, **Coupling & Shaft Alignment** Techniques, **Maintenance Auditing & Benchmarking**, **Reliability** Management, **Reliability Centered Maintenance Principles & Application**, **Efficient Shutdowns**, **Machinery Lubrication**, **Maintenance Planning & Scheduling**, **Coupling & Shaft Alignment** Techniques, Reliability, Availability & Maintainability (**RAM**), **Root Cause** Analysis, **Maintenance** Process, **Reliability-Centered Maintenance** (**RCM**), **Reliability Engineering Analysis** (**RE**), **Root Cause Analysis** (**RCA**), **Asset Integrity Management** (**AIM**), **Reactive & Proactive** Maintenance, **Pressure Safety Relief Valve** Repair & Recalibration, **PSV/PRV** Troubleshooting, **PRV** Testing & Repair, **Valve** Testing & Inspection, **Valve** Sealing, **Valve** Calibration, **Control Valves & Actuators**, **Boiler** Inspection & Maintenance, **Boiler** Systems, **Boiler** instrumentation & Controls, **Boiler** Start-up & Shutdown, **Boiler** Operation & Steam System Management, **Boiler** Water Chemistry & Treatment, **Boiler** Efficiency & Waste Heat Recovery, **Boiler** Inspection & Testing, **Boiler** Maintenance, **Boiler** Troubleshooting & Safety, **Boiler** Emissions & Pollution Control, **Combustion** Analysis & Tuning Procedures, **Water Treatment** Technology, Heat Recovery Steam Generating (**HRSG**), **Impulse Tube** Installation & Inspection, **Parker Compression Fittings**, **Pipes & Fittings**, **PSV Inspection**, **Root Cause Failure Analysis**, **Tank** Design & Engineering, **Tank Shell**, **Tanks & Tank Farms**, **Vacuum Tanks**, **Gas Turbine** Operating & Maintenance, **Reciprocating & Centrifugal Compressors**, **Screw Compressor**, **Compressor** Control & Protection, **Gas & Steam Turbines**, **Turbine** Operations, **Gas Turbine** Technology, **Valves**, **Process Control Valves**, **Bearings & Lubrication** and Advanced **Machinery Dynamics**.

During his career life, Mr. Ladwig has gained his practical experience through his various significant positions and dedication as the **Mechanical Engineer**, **Project Engineer**, **Reliability & Maintenance Engineer**, **Maintenance Support Engineer**, **Process Engineer**, **HSE Supervisor**, **Warehouse Manager**, **Quality Manager**, **Business Analyst**, **Senior Process Controller**, **Process Controller**, **Safety Officer**, **Mechanical Technician**, **Senior Lecturer** and **Senior Consultant/Trainer** for various companies such as the Sasol Ltd., Sasol Wax, Sasol Synfuels, just to name a few.

Mr. Ladwig has a **Bachelor's** degree in **Chemical Engineering** and a **Diploma** in **Mechanical Engineering**. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and has delivered various trainings, workshops, seminars, courses and conferences internationally.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Sunday, 01st of February 2026***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Turnarounds & Shutdowns*** *Definition and Importance of Turnarounds • Types of Turnarounds (Emergency, Planned, Unplanned) • Key Challenges in Turnaround Execution • Impact on Business Operations and Finances*
0930 – 0945	*Break*
0945 – 1030	***Turnaround Lifecycle & Phases*** *Overview of Turnaround Phases: Preparation, Execution and Closure • Key Milestones in Each Phase • Differences Between Project Management and Turnaround Management • Case Studies of Successful Turnarounds*
1030 – 1130	***Turnaround Planning Framework*** *Establishing Turnaround Objectives • Scope Definition and Management • Integration with Organizational Strategy • Identifying Key Stakeholders and Roles*
1130 – 1215	***Risk Management in Turnarounds*** *Identifying and Assessing Risks • Developing a Risk Mitigation Plan • Contingency Planning for High-Risk Activities • Tools for Monitoring Risks during Execution*
1215 – 1230	*Break*
1230 – 1330	***Scope Definition & Optimization*** *Techniques for Scope Identification • Tools for Scope Validation (e.g., Pareto Analysis, Root Cause Analysis) • Strategies for Avoiding Scope Creep • Managing Competing Priorities in Scope Planning*
1330 – 1420	***Resource Planning & Allocation*** *Identifying Resource Requirements (Labor, Materials, Equipment) • Estimating Resource Costs and Availability • Balancing Internal versus External Resources • Strategies for Dealing with Resource Constraints*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2: ***Monday, 02nd of February 2026***

0730 – 0830	***Work Breakdown Structure (WBS) Development*** *Purpose of WBS in Turnarounds • Techniques for Creating a Comprehensive WBS • Integrating WBS into Project Schedules • Benefits of WBS for Cost and Time Tracking*
0830 – 0930	***Scheduling Fundamentals*** *Key Components of an Effective Schedule • Critical Path Method (CPM) and its Application • Gantt Charts for Turnaround Visualization • Common Scheduling Pitfalls and How to Avoid Them*
0930 – 0945	*Break*

0945 – 1100	***Estimating Techniques for Turnarounds*** *Types of Estimates (Top-Down versus Bottom-up) • Tools and Methods for Accurate Cost Estimation • Benchmarking for Realistic Estimates • Strategies for Managing Estimate Uncertainties*
1100 – 1215	***Contracting & Procurement Strategies*** *Types of Contracts Used in Turnarounds • Selecting the Right Contractors • Procurement Timelines and Integration with Planning • Managing Vendor Relationships Effectively*
1215 – 1230	*Break*
1230 – 1330	***Communication & Stakeholder Engagement*** *Developing a Turnaround Communication Plan • Tools for Effective Communication (Dashboards, Reports) • Managing Stakeholder Expectations • Conflict Resolution Strategies*
1330 – 1420	***Key Performance Indicators (KPIs) for Planning*** *Identifying Critical Planning KPIs • Setting Measurable Objectives • Monitoring Planning Performance • Using KPIs for Continuous Improvement*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3: ***Tuesday, 03rd of February 2026***

0730 – 0830	***Detailed Scheduling Techniques*** *Developing Activity Networks • Resource Leveling and Allocation Strategies • Handling Interdependencies in Activities • Tools for Dynamic Scheduling*
0830 – 0930	***Budgeting & Cost Control*** *Creating a Turnaround Budget • Techniques for Cost Tracking • Managing Budget Overruns • Post-Turnaround Cost Reconciliation*
0930 – 0945	*Break*
0945 – 1100	***Safety Management During Turnarounds*** *Developing a Comprehensive Safety Plan • Conducting Hazard Assessments • Safety Training and Certifications • Emergency Response Planning*
1100 – 1215	***Quality Assurance & Quality Control (QA/QC)*** *Establishing QA/QC Standards • Inspection and Testing Protocols • Managing Non-Conformance Issues • Role of QA/QC during Execution*
1215 – 1230	*Break*
1230 – 1330	***Managing Change During Execution*** *Change Management Processes • Evaluating the Impact of Changes on Scope and Schedule • Communicating Changes to Stakeholders • Avoiding Decision Paralysis During Execution*
1330 – 1420	***Real-Time Monitoring & Reporting*** *Tools for Live Progress Tracking • Dashboards for Decision-Making • Reporting Structures and Frequency • Escalation Protocols for Critical Issues*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4: Wednesday, 04th of February 2026

0730 – 0830	***Handover & Commissioning*** *Preparing for Asset Handover • Commissioning Procedures and Documentation • Ensuring Operational Readiness • Lessons Learned from the Handover Process*
0830 – 0930	***Post-Turnaround Review*** *Conducting a Post-Mortem Analysis • Evaluating Turnaround Success Against KPIs • Documenting Challenges and Successes • Developing a Turnaround Improvement Plan*
0930 – 0945	*Break*
0945 – 1100	***Data Management & Reporting*** *Collecting and Storing Turnaround Data • Analyzing Data for Insights • Generating Comprehensive Turnaround Reports • Utilizing Data for Future Planning*
1100 – 1215	***Lessons Learned & Continuous Improvement*** *Importance of Lessons Learned Sessions • Capturing Insights from Stakeholders • Developing a Lessons-Learned Repository • Integrating Lessons into Future Plans*
1215 – 1230	*Break*
1230 – 1330	***Financial Reconciliation*** *Finalizing Turnaround Costs • Identifying Variances and Their Causes • Reporting Financial Performance to Management • Strategies for Cost Optimization in Future Turnarounds*
1330 – 1420	***Long-Term Sustainability Post-Turnaround*** *Embedding Best Practices into Operations • Aligning Turnaround Outcomes with Business Goals • Training and Knowledge Transfer to Teams • Building Organizational Resilience for Future Turnarounds*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

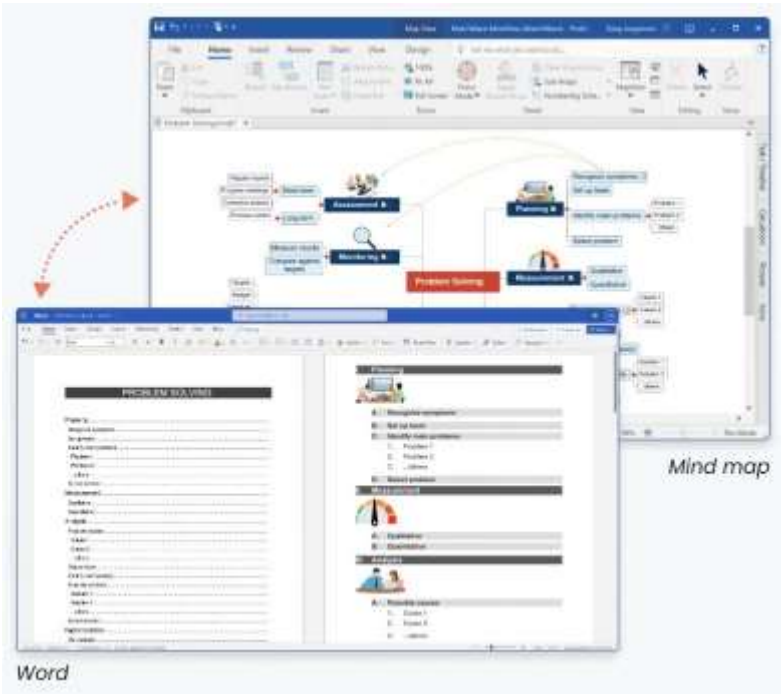
Day 5: Thursday, 05th of February 2026

0730 – 0830	***Review of Real-Life Turnaround Case Studies*** *Analysis of Successful Turnarounds • Learning from Failed Turnarounds • Key Takeaways and Actionable Insights • Participant-Led Discussions*
0830 – 0930	***Practical Exercises in Planning & Scheduling*** *Developing a Turnaround Plan from Scratch • Creating a WBS and Project Schedule • Budgeting and Resource Allocation Exercises • Identifying Risks and Mitigation Strategies*
0930 – 0945	*Break*
0945 – 1215	***Simulation of Turnaround Scenarios*** *Real-Time Problem-Solving Exercises • Handling Scope Changes and Emergencies • Team-Based Role-Playing Activities • Performance Evaluation and Feedback*
1215 – 1230	*Break*

1230 – 1345	***Advanced Tools & Technologies for Turnarounds*** *Overview of Software Tools (Primavera, MS Project) • Integrating AI and Machine Learning in Turnarounds • Predictive Maintenance Technologies • Utilizing Digital Twins for Planning and Execution*
1345– 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the "MS Project" and "Mindview Software".



Mindview Software

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