

COURSE OVERVIEW RE0249

Maintenance Planning & Scheduling in the Digital Transformation Age *Streamlining Maintenance Strategies with Digital Innovation*

Course Title

Maintenance Planning & Scheduling in the Digital Transformation Age: *Streamlining Maintenance Strategies with Digital Innovation*

Course Date/Venue

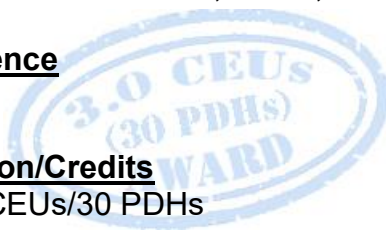
November 02-06, 2025/Abu Dhabi Meeting Room, The Tower Plaza Hotel, Dubai, UAE

Course Reference

RE0249

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 Maintenance Planning & Scheduling in the Digital Transformation Age: Streamlining Maintenance Strategies with Digital Innovation. It covers the modern maintenance strategies, maintenance planning principles and workflow, asset management frameworks and digital readiness; the data-driven decision-making in maintenance, CMMS and EAM systems fundamentals and digital transformation roadmap for maintenance; the detailed job planning techniques, scheduling strategies and optimization; the resource and workforce planning and spare parts and materials management in digital maintenance; the digital twin technology in maintenance planning and risk-based planning and prioritization; and the predictive maintenance concepts and strategies.



During this interactive course, participants will learn the cloud platforms and mobile solutions for maintenance; the augmented reality (AR) and virtual reality (VR) in maintenance, big data and advanced analytics for maintenance optimization and work execution digitalization; the performance measurement, continuous improvement and advanced scheduling tools and software platforms; the cost optimization and budgeting in digital maintenance and change management for digital maintenance transformation; the sustainability and ESG in digital maintenance; and building a smart maintenance organization.

Course Objectives

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

- Apply and gain a comprehensive knowledge on maintenance planning and scheduling in the digital transformation age
- Carryout modern maintenance strategies, maintenance planning principles and workflow, asset management frameworks and digital readiness
- Employ data-driven decision-making in maintenance and discuss CMMS and EAM systems fundamentals including digital transformation roadmap for maintenance
- Apply detailed job planning techniques, scheduling strategies and optimization, resource and workforce planning as well as spare parts and materials management in digital maintenance
- Recognize digital twin technology in maintenance planning and apply risk-based planning and prioritization
- Carryout predictive maintenance concepts and strategies and discuss leveraging AI and machine learning in maintenance
- Identify cloud platforms and mobile solutions for maintenance and industrial IoT (IIoT) integration with maintenance systems
- Apply augmented reality (AR) and virtual reality (VR) in maintenance, big data and advanced analytics for maintenance optimization and work execution digitalization
- Integrate maintenance with other digital systems and apply performance measurement and continuous improvement including advanced scheduling tools and software platforms
- Carryout cost optimization and budgeting in digital maintenance and change management for digital maintenance transformation
- Discuss industry 4.0 and maintenance 5.0 trends, design a digital maintenance strategy and apply cybersecurity and data governance in maintenance
- Carryout sustainability and ESG in digital maintenance and build a smart maintenance organization

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 maintenance planning and scheduling in the digital transformation age for maintenance planners and schedulers, maintenance supervisors and team leaders, reliability and asset management professionals, plant and operations engineers, shutdown/turnaround planners and coordinators, CMMS/EAM/ERP system users and administrators, cost estimators, budget analysts and maintenance controllers, digital transformation leaders and IT specialists and other technical staff.

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.



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. Moayyad Sanori is a **Senior Mechanical & Maintenance Engineer** with almost **30 years** of extensive experience within the **Mechanical Maintenance, Maintenance & Reliability Management, Modern Maintenance Strategies, Maintenance scheduling Strategies & Optimization, Preventive & Predictive Maintenance, Root Cause Analysis Techniques, Rotating Equipment Reliability Assurance, Site Reliability Optimization Plan, Oil & Gas, Petrochemical and Refinery Industries.** His expertise widely covers in the areas of **Fire Protection & Life Safety System Testing, Sprinkler System Inspection & Maintenance, Standpipe & Hose Systems, Fire Pump Maintenance, Water Storage Tank Inspection, Valve Inspection & Testing, Safety Relief Valves, Air Compressor & Nitrogen Generators, Piping Assessment, Mechanical Pipe Fitting, Fire Pump Inspection & Testing, Fire Suppression Design, Fired Heaters & Exchangers, Process Plant Operation, Hydrocarbon Production Operation, Monitoring & Maintaining HSE Systems, Emergency & Critical Situations Control, Integrated Process Systems Start-up, Shutdown, Monitoring & Control, Process Plant Equipment Isolation Machinery Failure Analysis (RCFA), Condition Based Monitoring, Centrifugal Pumps & Compressors Overhauling, Positive Displacement Pump, Heat Exchangers, Steam & Gas Turbine, Heat Recovery Steam Generator, Combined Cycle, Pipe Erection Installation, Welding Operations, Tank Pressure LPG, CNC Fabrication, Safety Valves, Distillation Columns, Gearbox, Pipe Fitting, Lathes, Milling, Diesel Engines, Boiler & Burners, Turbines & Motors, Power Piping, and ASNT-NDT Inspection Methods.** He is currently the **General Maintenance Supervisor** of **Jable Oil Services** with collaboration of **Waha Oil Company** wherein he is responsible in supervising the maintenance and operation of pumps, compressors, gas turbines, steam turbines, pipe testing and training of new employees.

During Mr. Moayyad's career he has handled key positions as such **Mechanical Maintenance Manager, Mechanical Maintenance Supervisor, Pipe Testing Supervisor, Radiation Supervisor, NDT Supervisor, General Maintenance Supervisor, Piping Testing Engineer, NDT Technician, Mechanical & Pipe Fitting Instructor** and **Pump Maintenance Technician** of various international companies including **Jordan Petroleum Refinery Company, Saudi Aramco, Rawabi Industrial Support Services, Experts Industrial Testing Company, Petra for Mechanical Testing Company** and **Al-Waei Metal Forming Establishment.**

Mr. Moayyad has an **Associate Diploma in Mechanical Engineering.** Further, he is a **Certified Instructor/Trainer, a Certified ASNT-NDT Level II** in Radiography (RT), Magnetic Particle Testing (MT), **Liquid Penetrant Testing (PT)** and **Ultrasonic Thickness Testing (UTT)** and a **Certified Assessor** by **City & Guilds Level 3 Certificate in Assessing Vocational Achievement** under the **TAQA Qualification (Training, Assessment & Quality Assurance).** He has further delivered numerous trainings, courses, seminars, workshops and conferences internationally.

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.

Accommodation

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

Course Fee

US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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, 02nd of November 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to Modern Maintenance Strategies <i>Evolution from Reactive to Predictive Maintenance • Objectives and KPIs in Digital Maintenance Planning • Integrating Maintenance into Asset Lifecycle Management • Role of Maintenance in Operational Excellence</i>
0930 – 0945	Break
0945 – 1030	Maintenance Planning Principles & Workflow <i>Maintenance Planning versus Scheduling – Key Distinctions • Work Identification, Prioritization and Scoping • Work Order Creation and Job Plan Development • Planning Documentation and Standardization</i>
1030 – 1130	Asset Management Frameworks & Digital Readiness <i>Overview of ISO 55000 and its Implications • Aligning Maintenance with Asset Management Strategy • Assessing Digital Maturity in Maintenance Organizations • Roadmapping Transformation Initiatives</i>
1130 – 1215	Data-Driven Decision-Making in Maintenance <i>The Importance of Data Accuracy and Completeness • Sources of Maintenance Data (CMMS, IoT, EAM Systems) • Data Visualization and Dashboards for Decision Support • Using KPIs to Guide Planning Decisions</i>
1215 – 1230	Break

1230 – 1330	CMMS & EAM Systems Fundamentals Core Functions and Benefits of CMMS/EAM Tools • Digital Workflows for Work Orders and Asset Tracking • Integration with Procurement, Inventory and Finance • Common Pitfalls and Success Factors in Implementation
1330 – 1420	Digital Transformation Roadmap for Maintenance Aligning Digital Initiatives with Organizational Goals • Phased Adoption of Digital Tools and Technologies • Defining Success Metrics for Digital Maintenance Programs • Case Studies of Successful Digital Transformations
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, 03rd of November 2025

0730 – 0830	Detailed Job Planning Techniques Defining Job Scope, Labor, Materials and Tools • Creating Standard Job Plans and Libraries • Incorporating Safety, Quality and Compliance Requirements • Planning for Critical versus Non-Critical Tasks
0830 – 0930	Scheduling Strategies & Optimization Short-, Medium- and Long-Term Scheduling Horizons • Time-Based versus Condition-Based Scheduling Approaches • Gantt Charts, Calendars and Resource Leveling Tools • Optimizing Schedules Under Constraints
0930 – 0945	Break
0945 – 1100	Resource & Workforce Planning Forecasting Labor and Skill Requirements • Multi-Skilled Workforce Utilization in Digital Contexts • Contractor and Vendor Management in Digital Workflows • Capacity Planning and Bottleneck Identification
1100 – 1215	Spare Parts & Materials Management in Digital Maintenance Integrating Inventory Systems with Maintenance Schedules • Predictive Stocking Using AI and Analytics • Lead Time Reduction and Procurement Synchronization • Vendor-Linked Digital Supply Chain Solutions
1215 – 1230	Break
1230 – 1330	Digital Twin Technology in Maintenance Planning Concept and Applications of Digital Twins • Virtual Asset Modeling and Scenario Simulations • Predictive Maintenance and Real-Time Adjustments • Integration with Planning and Scheduling Tools
1330 – 1420	Risk-Based Planning & Prioritization Applying Risk Matrices to Maintenance Planning • Criticality Analysis and Asset Prioritization • Balancing Cost, Risk and Reliability • Case Examples of Risk-Based Scheduling Decisions
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, 04th of November 2025

0730 – 0830	Predictive Maintenance Concepts & Strategies Transition From Preventive to Predictive Maintenance • Key Technologies: Sensors, IoT and Condition Monitoring • Predictive Algorithms and Remaining Useful Life (RUL) Estimation • Impact on Planning and Resource Allocation
0830 – 0930	Leveraging AI & Machine Learning in Maintenance AI Use Cases: Anomaly Detection, Failure Prediction • Automating Maintenance Schedules Based on Predictive Insights • AI-Driven Optimization of Work Orders • Overcoming Data Quality and Algorithmic Challenges
0930 – 0945	Break
0945 – 1100	Cloud Platforms & Mobile Solutions for Maintenance Benefits of Cloud-Based Maintenance Management • Mobile Apps for Field Maintenance and Data Capture • Real-Time Collaboration and Digital Work Permits • Cybersecurity Considerations for Cloud Adoption
1100 – 1215	Industrial IoT (IIoT) Integration with Maintenance Systems Architecture of IoT-Enabled Maintenance Systems • Sensor Data Integration and Edge Computing • Real-Time Monitoring Dashboards and Alerts • ROI Calculation for IIoT Investments
1215 – 1230	Break
1230 – 1330	Augmented Reality (AR) & Virtual Reality (VR) in Maintenance AR for Remote Assistance and Guided Repairs • VR for Maintenance Training and Planning Simulations • Mixed Reality for Complex Asset Interventions • Case Studies of Immersive Technology in Maintenance
1330 – 1420	Big Data & Advanced Analytics for Maintenance Optimization Collecting and Processing Large Volumes of Maintenance Data • Predictive and Prescriptive Analytics Workflows • Data-Driven Decision Frameworks • Case Studies of Data-Centric Maintenance Strategies
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, 05th of November 2025

0730 – 0830	Work Execution Digitalization Digital Work Orders and Job Tracking Systems • Smart Devices and Wearable Tech in Field Maintenance • Digital Safety Permits and Compliance Documentation • Mobile Dashboards for Supervisors and Planners
0830 – 0930	Integrating Maintenance with Other Digital Systems ERP, MES, SCADA and CMMS Integration • Digital Workflows Across Maintenance, Operations and Reliability • Data Synchronization and Cross-Functional Visibility • Best Practices for System Interoperability
0930 – 0945	Break
0945 – 1100	Performance Measurement & Continuous Improvement Maintenance KPIs: MTTR, MTBF, OEE, Backlog, Schedule Compliance • Using Dashboards and BI Tools for Performance Tracking • Root Cause Analysis and Corrective Action Tracking • Digital Continuous Improvement Loops

1100 – 1215	Advanced Scheduling Tools & Software Platforms Overview of Leading Digital Scheduling Solutions • AI-Based Schedulers and Constraint-Based Optimization • Digital Gantt Charts and Predictive Resource Allocation • Integration with Predictive Maintenance Tools
1215 – 1230	Break
1230 – 1330	Cost Optimization & Budgeting in Digital Maintenance Life-Cycle Cost Analysis (LCCA) with Digital Tools • Predictive Budgeting and Cost Forecasting • Linking Maintenance Spend to Reliability Outcomes • Case Study: Reducing Costs with Predictive Scheduling
1330 – 1420	Change Management for Digital Maintenance Transformation Overcoming Resistance to Digital Adoption • Upskilling the Workforce for Digital Tools • Communication and Stakeholder Engagement Strategies • Building a Culture of Data-Driven Decision-Making
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

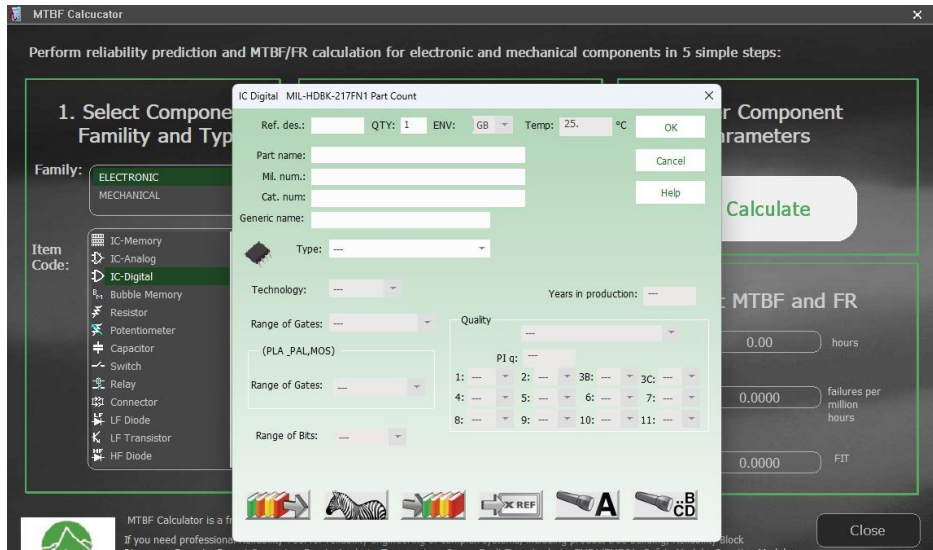
Day 5: Thursday, 06th of November 2025

0730 – 0830	Industry 4.0 & Maintenance 5.0 Trends Evolution from Industry 4.0 to 5.0 and its Maintenance Implications • Human-Machine Collaboration in Maintenance Workflows • Cognitive Maintenance and Self-Healing Systems • Emerging Technologies: AI Copilots, Robotics, Blockchain
0830 – 0930	Designing a Digital Maintenance Strategy Steps for Building a Long-Term Maintenance Roadmap • Aligning Digital Initiatives with Corporate Strategy • Investment Planning and ROI Assessment • Governance and Policy Frameworks
0930 – 0945	Break
0945 – 1100	Cybersecurity & Data Governance in Maintenance Protecting Digital Maintenance Assets from Cyber Threats • Data Ownership, Privacy and Regulatory Compliance • Secure System Integration and Access Control • Cybersecurity Incident Response Planning
1100 – 1215	Sustainability & ESG in Digital Maintenance Linking Maintenance Strategies to Sustainability Goals • Energy-Efficient Asset Management Practices • Reducing Carbon Footprint through Predictive Maintenance • ESG Reporting and Digital Traceability
1215 – 1230	Break
1230 – 1300	Building a Smart Maintenance Organization New Roles and Competencies in Digital Maintenance Teams • Skills Gap Analysis and Workforce Transformation • Leadership and Innovation in Maintenance Organizations • Collaborative Ecosystems with Technology Partners
1300 – 1345	Capstone Project & Case Study Workshop Real-World Digital Maintenance Scenario Analysis • Group Exercise: Design a Digital Maintenance Roadmap • Presentation of Strategies and Peer Feedback
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

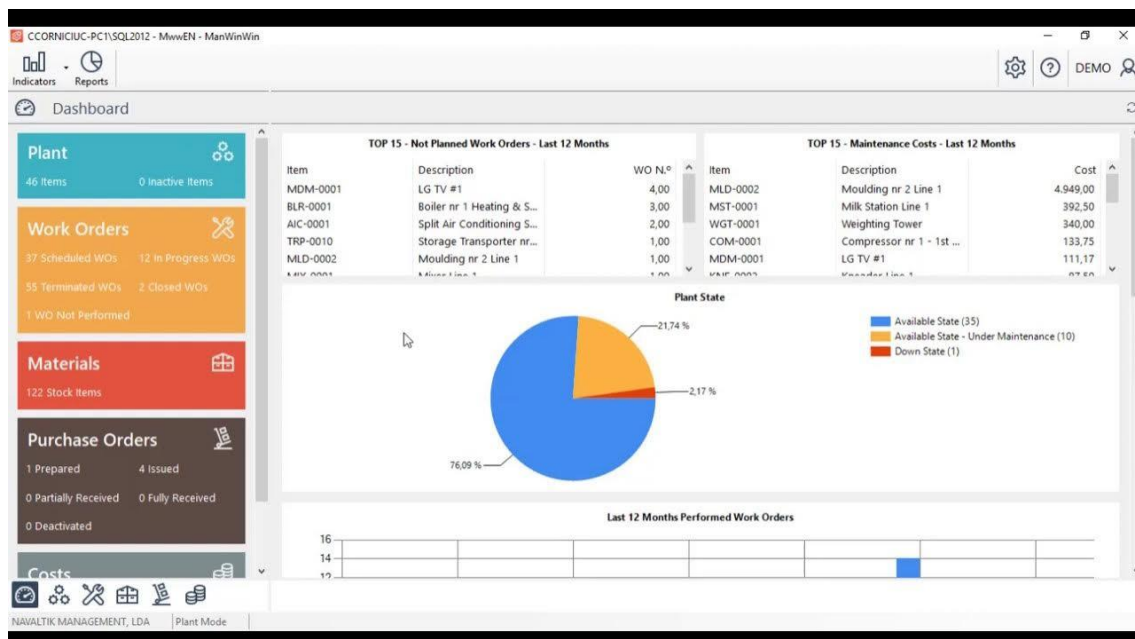


Simulator (Hands-on Practical Sessions)

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 state-of-the-art simulator “MTBF Calculator” and “ManWinWin Express CMMS Software”.



MTBF Calculator



ManWinWin Express CMMS Software

Course Coordinator

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