



COURSE OVERVIEW RE0225

Maintenance Planning Scheduling & Work Control

Course Title

Maintenance Planning Scheduling & Work Control

Course Date/Venue

November 16-20, 2025/Meeting Plus 9, City Centre Rotana, Doha, Qatar

Course Reference

RE0225

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 Certified Maintenance Planner (CMP). It covers the maintenance planning and integrated maintenance production management partnership; the planning, coordination and scheduling to management and operations; the good maintenance practices and the responsible supervisor or team leader; the six planning and scheduling principle; and the wrench time, actual hours to plan estimate, planning variance index and enhancing planner productivity.



During this interactive course, participants will learn the backlog management, existing staffing processes and preventive/predictive maintenance inspections; the steady state backlog relief, deferred maintenance, capital program requirements and other considerations for staffing; the planning process (micro-planning) and detailed planning process-materials, tools and equipment; the work measurement, analytical estimating, scheduling maintenance work and job execution; and the job close-out and follow-up, managing planning, direct and indirect measure of planning effectiveness and project planning and management.

Course Objectives

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

- Get certified as a “*Certified Maintenance Planner*”
- Discuss maintenance planning and integrated maintenance production management partnership
- Explain planning, coordination and scheduling to management and operations as well as identify work sampling, typical maintenance worker’s day and symptoms of ineffective job planning
- Carryout good maintenance practices and identify the responsible supervisor or team leader
- Discuss the six planning principles and scheduling principles
- Recognize wrench time and the actual hours to plan estimate
- Explain planning variance index and enhance planner productivity
- Discuss backlog management covering ready backlog and planned backlog as well as review checklist for backlog integrity and develop work programs and backlog weeks trend chart
- Apply existing staffing processes and preventive/predictive maintenance inspections
- Explain steady state backlog relief, deferred maintenance, capital program requirements and other considerations for staffing
- Illustrate planning process (micro-planning) including planning process-screening, scoping, research and detailed planning
- Discuss detailed planning process-materials, tools and equipment
- Employ work measurement, analytical estimating, scheduling maintenance work and job execution
- Carryout job close-out and follow-up, managing planning, direct and indirect measure of planning effectiveness and project planning and management

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 covers systematic techniques in maintenance planning, scheduling and work control to assist maintenance team responsible for delivering maximum reliability and availability of equipment at the lowest possible cost. It is intended for plant maintenance engineers, planning engineers, maintenance planners and maintenance coordinators.

To maximize the benefits of the course, delegates should be prepared to actively participate in the course and bring examples of standard work plans, a list of plant performance metrics, the work priority system in-place, and any other planning or scheduling material they would like to review and discuss.

Course Certificate(s)

- (1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a “*Certified Maintenance Planner*”. Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants: -






- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

* Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *				
		Haward Technology Middle East Continuing Professional Development (HTME-CPD)		
CEUs				
CEU Official Transcript of Records				
TOR Issuance Date:		14-Nov-22		
HTME No.		74851		
Participant Name:		Waleed Al Habeeb		
Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
RE0225	Certified Maintenance Planner (CMP)	November 10-14, 2022	30	3.0
Total No. of CEU's Earned as of TOR Issuance Date				3.0
<p>TRUE COPY</p> <p> Jaryl Castillo Academic Director</p>				
<p>Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2013 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2013 Standard.</p> <p>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 Association 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.</p>				
Haward Technology is accredited by				
				
P.O. Box 26070, Abu Dhabi, United Arab Emirates Tel.: +971 2 3091 714 E-mail: info@haward.org Website: www.haward.org				
* Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *				

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:-

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. 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.
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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 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 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 Process & 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 **Ammonia Manufacturing & Process Troubleshooting, Distillation Towers, Crude Oil Distillation, Ammonia Storage & Loading Systems, Operational Excellence in Ammonia Plants, Fertilizer Storage Management (Ammonia & Urea), Fertilizer Manufacturing Process Technology, Sulphur Recovery, Phenol Recovery & Extraction, Refining Process & Petroleum Products, Refinery Planning & Economics, Hydrotreating & Hydro-processing, Separators in Oil & Gas Industry, Gas Testing & Energy Isolations, Industrial Liquid Mixing, Extractors, Fractionation, Water Purification, Water Transport & Distribution, Environmental Emission Control, Process Plant Troubleshooting & Engineering Problem Solving, Process Plant Performance, Plant Startup & Shutdown, Process Troubleshooting Techniques and Oil & Gas Operation/Surface Facilities**. Further, he is also well-versed in **Rotating Machinery (BRM), Rotating Equipment Operation & Troubleshooting, Root Cause Analysis (RCA), Process Plant Shutdown, Turnaround & Troubleshooting, Planning & Scheduling Shutdowns & Turnarounds, Optimizing Equipment Maintenance & Replacement Decisions, Maintenance Planning & Scheduling, Material Cataloguing, Maintenance, Reliability & Asset Management Best Practices, Storage Tanks Operations & Measurements, Tank Inspection & Maintenance, Pressure Vessel Operation, Flare & Relief System, Flaring System Operation, PSV Inspection & Maintenance, Centrifugal & Reciprocating Compressor, Screw Compressor Troubleshooting, Heat Exchanger Overhaul & Testing, Pipe Stress Analysis, Control Valves & Actuators, Vent & Relief System, Centrifugal & Reciprocating Pump Installation & Repair, Heat Exchanger Troubleshooting & Maintenance, Steam Trapping & Control, Control & ESD System and Detailed Engineering Drawings, Codes & Standards**.

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.

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 Program

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

Day 1: Sunday, 16th of November 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to Maintenance Planning <i>Integrated Maintenance & Production Management Partnership • Definitions • Why Plan, Coordinate & Schedule Maintenance Jobs? • Objectives of Work Preparation • Prerequisites • Understanding the Nature of Maintenance Activities & Organizing Accordingly • Organization by Work Type</i>
0930 – 0945	Break
0945 – 1045	Selling Planning, Coordination & Scheduling to Management & Operations <i>Selling Management • Work Sampling • Typical Maintenance Worker's Day – With & Without Planning & Scheduling • Symptoms of Ineffective Job Planning • Convey the Many Benefits that Accrue to Each Stakeholder</i>
1045 – 1145	Where Planning Fits into Good Maintenance Practices <i>Should Work Preparation be a Separate and Distinct Function? • The Assigned Craftsman • The Responsible Supervisor or Team Leader • The Proven Answer • Channels of Coordination and Communication • Working Liaisons • Maintenance Liaisons • Should Planning be Separate from Scheduling? • Clarification of Roles • Relationship with other Functions</i>
1145 – 1200	Break
1200 – 1300	Planning Principles <i>Six Principles • The Planning Vision; The Mission • Planning Principle 1: Separate Department • Principle 2: Focus on Future Work • Principle 3: Component Level Files • Principle 4: Estimates Based on Planner Expertise • Principle 5: Recognize the Skill of the Crafts • Principle 6: Measure Performance with Schedule Compliance</i>



1300 – 1420	Scheduling Principles <i>Why Maintenance does not Assign Enough Work • Advance Scheduling in an Allocation • Principle 1: Plan for Lowest Required Skill Level (Prerequisites of Scheduling) • Principle 2: Schedules & Job Priorities are Important (Prerequisites of Scheduling) • Principle 3: Schedule from Forecast of Highest Skills Available (Advance Scheduling Process) • Principle 4: Schedule for Every Work Hour Available • Principle 4 Brings the Previous Scheduling Principles Together • Principle 5: Crew Leader Handles Current Day's Work • Principle 6: Measure Performance with Schedule Compliance</i>
1420 - 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day One</i>

Day 2: Monday, 17th of November 2025

0730 – 0930	Wrench Time <i>Definition • Objectives • Formula • Qualifications • Ample Calculation • Observations • Management of Planners</i>
0930 – 0945	<i>Break</i>
0945 – 1150	Actual Hours to Planning Estimate <i>Definition • Objectives • Formula • Component Definitions • Actual Work Order Hours • Planned Work Order Hours • Qualifications • Sample Calculation • Best in Class Target Value</i>
1150 – 1215	Planning Variance Index <i>Definition • Objectives • Formula • Component Definitions • Sample Calculation</i>
1215 – 1230	<i>Break</i>
1230 – 1330	Planner Productivity <i>Definition • Objectives • Formula • Sample Calculation • Sample #2 Using Job Plans</i>
1330 - 1420	Backlog Management: Ready Backlog <i>Definition • Objectives • Formula • Component Definition • Sample Calculation • Best in Class Target Value: 2 to 4 Weeks</i>
1420 - 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day Two</i>

Day 3: Tuesday, 18th of November 2025

0730 – 0930	Backlog Management: Planned Backlog <i>Definition • Objectives • Formula • Component Definitions • Ready Work • Sample Calculation • Job Status • Checklist for Backlog Integrity • Development of Work Programs • A Weekly Example of a Work Program • Backlog Weeks Trend Chart</i>
0930 – 0945	<i>Break</i>



0945 – 1045	Sizing the Maintenance Staff <i>Existing Staffing Processes • Preventive/Predictive Maintenance Inspections • Steady State Backlog Relief • Deferred Maintenance • Capital Program Requirements • Summary of Requirements • Other Considerations for Staffing • Another Approach to the Staffing Question</i>
1045 – 1145	The Planning Process (Micro-Planning) <i>Steps of the Planning Process • The Planned Job Package</i>
1145 – 1200	Break
1200 – 1420	The Planning Process-Screening, Scoping, Research & Detailed Planning <i>Screening of Work Requests • Job Assessment & Scoping Check-list • Dealing with Scope Creep • Job Research • Job Preparation • Feedback on the Plan • Job Planning Survey • Coordination of Equipment Access, Permitting, Safety & Statutory Permission</i>
1420 - 1430	Recap <i>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</i>
1430	Lunch & End of Day Three

Day 4: Wednesday, 19th of November 2025

0730 – 0930	Detailed Planning Process-Materials, Tools & Equipment <i>Planner/Scheduler Responsibilities to the Material Management Process • Material Related Steps in the Planning of Specific Jobs are Summarized • The Planner's Role in Rebuilding • Controlling the Maintenance Storeroom with Statistical Inventory Control • JIT Versus SIC</i>
0930 – 0945	Break
0945 – 1045	Work Measurement <i>Adjusted Averages • Analytical Estimates • Job Slotting & Labor Libraries • Universal Maintenance Standards • Building an Estimate • Job Creep</i>
1045– 1145	Analytical Estimating <i>Common Job Sequence • Travel-Time Table • Miscellaneous Provision Table • The Labour Library • Development of Slotting Tables • Slotting Table Cataloguing • Job Estimating Worksheet • Coordination with Operations</i>
1145 – 1200	Break
1200 – 1420	Scheduling Maintenance Work <i>The Weekly Expectation • Scheduling Techniques • Instruction for Preparing Schedules • Completing the Scheduling Process</i>
1420 - 1430	Recap <i>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</i>
1430	Lunch & End of Day Four

Day 5: Thursday, 20th of November 2025

0730 – 0930	Job Execution <i>Three Important Functions • Daily Schedule Adjustment • Planner Support of Job Execution • The Morning Meeting</i>
0930 – 0945	Break
0945 – 1045	Job Close Out & Follow Up <i>Schedule Compliance • Reasons for Non-Compliance • Reason for Schedule Non-Compliance • Calculation of Schedule Compliance • Sample Calculation • Supplementary Metrics</i>



1045 - 1215	Planner & Scheduler Metrics <i>Managing Planning • Direct Measure of Planning Effectiveness • Indirect Measures of Planning Effectiveness • The Follow-Up Critique • Activity Sampling • Using CMMS to Aid Planning and Scheduling</i>
1215 - 1230	<i>Break</i>
1230 - 1300	Planning & Management of Projects <i>Project Management Process • Phase One – Project Definition • Phase Two – Preliminary Engineering • Phase Three – Justification and Funding • Phase Four – Detailed project Planning • Phase Five – Project Execution • Phase Six – Project Completion and Close-Out • Phase Seven – Project Review (6 Months After Completion)</i>
1300 - 1315	Course Conclusion <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i>
1315 - 1415	COMPETENCY EXAM
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

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”.





The screenshot displays the Mindview Software interface. The top window shows a mind map for 'Problem Solving' with branches for 'Assessment', 'Planning', 'Measurement', and 'Monitoring'. The bottom window shows a Word document titled 'PROBLEM SOLVING' with a table of contents and a list of steps: 1. Recognize symptoms, 2. Set up team, 3. Identify main problems, 4. Select problem, 5. Measurement, 6. Analysis, 7. Possible causes. A red arrow points from the mind map to the Word document.

Mind map

Word

Mindview Software

Course Coordinator

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