

COURSE OVERVIEW RE0205
Professional Maintenance Planner (CMP)
(Accredited by ILM)

Course Title

Professional Maintenance Planner (CMP)
(Accredited by ILM)

Course Date/Venue

December 01-05, 2024/ Boardroom 1, Elite Byblos
 Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference

RE0205

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



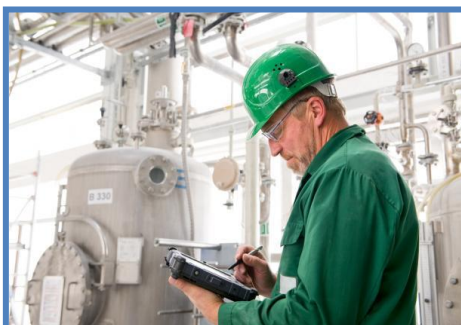
Course Description



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



Maintenance planning, scheduling and work control are the most important elements in modern maintenance management. Maintenance planning and scheduling are also synonymous with control of maintenance. Further, maintenance planning and scheduling of work orders in addition to the control of such work are considered as the hub of a well functioning maintenance organization. In order for maintenance planning and scheduling to work many other systems need to work well. Most importantly equipment inspections through preventive maintenance, technical database such as bill of materials, work order history, and standard job plans. Maintenance spare part stores have to function well, see the above illustration picture.



In a world where sustainable cost-effectiveness and productivity is paramount, your focus is on increasing company revenue by enhancing the performance of your physical assets. Are you up to the challenge? Maintenance Management and plays a critical part within Physical Asset Management. By understanding the fundamental processes behind this strategy you will be able to identify the essential responsibilities you need to undertake in order to initiate a Maintenance Planning, Scheduling and Control program. But Maintenance Planning and Scheduling is not effective unless a strong reliability culture exists and reliability principles are understood and applied.

This course is designed to assist maintenance team responsible for delivering maximum reliability and availability of equipment at the lowest possible cost. The course will present techniques designed to improve the effectiveness of maintenance management activities, to ensure that physical assets perform their required functions, operate reliably, and support corporate goals. The sessions will focus on the modern methods and techniques on the most critical aspects of maintenance management such as organizing maintenance resource, selecting the right maintenance work, analyzing failures, setting and conducting a maintenance plan, planning spare parts, estimating and controlling maintenance costs, computerizing maintenance planning and measurement operations. The delegate will also be introduced to reliability tools and the effect human reliability has on plant availability.

Course Objectives

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

- Get certified as a “*Professional Maintenance Planner*”
- Apply the bottom-line benefits of maintenance planning, scheduling and work control as the core business process
- Perform the critical steps in the identification of necessary maintenance work
- Develop a proactive maintenance planning system to reduce costs, downtime and backlogs
- Achieve streamlined maintenance processes by developing an effective planning program
- Analyze work requests using a risk-based approach so only necessary work is performed
- Apply proven performance measurement tools tailored to your maintenance conditions in order to guarantee the successful execution of maintenance work
- Manage scheduling and coordination as well as develop an accurate and reliable maintenance history through tracing and analyzing maintenance
- Improve turnaround performance by applying proven best practices
- Utilize best practice performance management in order to control your Maintenance work process
- Identify the various support elements as well as employ proper work planning, scheduling and work control
- Effectively decrease downtime by coordinating and streamlining your maintenance planning, scheduling and control process

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, sample video clips of the instructor’s actual lectures & practical sessions during the course 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.

Exam Eligibility & Structure

Exam candidates shall have the following minimum pre-requisites:-

Category (1): Holders of a 5-year Engineering Degree. No experience required
or,

Category (2): Holders of a 2-3 years Engineering Diploma with minimum 5 years of experience in Maintenance or Project departments

or,

Category (3): Holders of a High School Certificate with minimum 10 years of experience in Maintenance or Project departments in which 5 years experience in Planning section

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\$ 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.

Accommodation

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



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 Professional 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: -





Haward Technology Middle East

Professional Maintenance Planner

Certification Number: 74851
 Certification Date: 14-Nov-2023
 Expiration Date: 14-Nov-2028

This is to certify that **Waleed Al Habeeb** has successfully met the requirements to be certified as a **Professional Maintenance Planner** under the Professional Maintenance Planner (CMP) (Accredited by ILM) Program, RE0205.



J. Castillo
Mr. Jaryl Castillo
Academic Director

Haward Technology is accredited by:





Haward Technology Middle East

Professional Maintenance Planner

Certification Program

This program is designed to assist companies in identifying professionals who have satisfied the minimum competencies specified in RE0205.

Haward Technology does not warrant or guarantee the performance of any professional certified under this program.

P.O. Box 26070
Abu Dhabi, UAE
Tel: +971 2 30 91 714
Http://www.haward.org

Haward Technology is accredited by:






74851

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

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ILM (City & Guilds Group)

Haward Technology has been awarded the **ILM Recognised** status under the **City & Guilds Group Business**. The ILM stands for excellence in leadership and management qualifications design, development and delivery under the City & Guilds of London Institute as the award-giving body for these qualifications. ILM recognises and approved the programmes of training providers and academic institutions that deliver quality-assured training and accredited qualifications. As an Approved Provider of ILM Recognised programmes, Haward Technology meets the quality assurance criteria of the ILM to deliver application-based leadership and management programs that meet international standards and professional benchmarks.

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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.

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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.

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 & HSE Consultant** with over **25 years** of extensive experience within the **Oil & Gas, Refinery, Petrochemical & Power** industries. His expertise widely covers in the areas of **Best Practice In Maintenance Management, Maintenance Troubleshooting, Preventive Maintenance & Corrective Maintenance, Maintenance Planning, Scheduling, Management & Work Control**, Certified Maintenance Planner (**CMP**), Certified Planning & Scheduling Professional (**AACE-PSP**), **Maintenance Optimization & Best Practices, Engine Construction & Maintenance, Process Plant Shutdown & Turnaround, Maintenance Auditing & Benchmarking, Machinery Lubrication, Machinery Failure Analysis, Reliability, Availability & Maintainability (RAM), Reliability-Centered Maintenance (RCM), Reliability Engineering Analysis (RE), Root Cause Analysis (RCA), Asset Integrity Management (AIM), Reactive & Proactive Maintenance, Compressors & Turbines Operation, Maintenance & Troubleshooting, Reciprocating & Centrifugal Compressors, Screw Compressor, Compressor Control & Protection, Gas & Steam Turbines, Turbine Operations, Gas Turbine Technology, Centrifugal Pumps, Bearings, Couplings, Screw Compressors & Heat Exchangers Operation, Maintenance, Inspection, Troubleshooting, Lubrication & Shaft Alignment, Gas Turbine Operating & Maintenance, Pressure Safety Relief Valve Repair & Recalibration, PSV/PRV Troubleshooting, Valve Testing & Inspection, Control Valves & Actuators, Boiler Inspection & Maintenance, Boiler Systems, Boiler instrumentation & Controls, Boiler Start-up & Shutdown, Boiler Operation & Steam System Management, Heat Recovery Steam Generating (HRSG), Impulse Tube Installation & Inspection, Pipes & Fittings, Tank Design & Engineering, Tank Shell, Tanks & Tank Farms, Bearings & Lubrication** and Advanced **Machinery Dynamics**. Further, he is also well-versed in **Hazardous Materials & Chemicals Handling, Hazardous Materials (HAZMAT), Hazard Identification & Operability (HAZOP), Professional HAZOP/PHA Leader: Advanced Process Hazard Analysis (PHA) Methods & Leadership (HAZOP, What-if, FMEA), Process Safety Management (PSM), Layer of Protection Analysis (LOPA), Behavioural Based Safety (BBS), Job Safety Analysis (JSA), Permit to Work (PTW), Authorized Gas Tester (AGT), Confined Space Entry & Rescue, Pre-Startup Safety Reviews (PSSR), Safety in Process Plants, Risk Assessment, Risk Management, Emergency Planning, Emergency Response & Crisis Management Operations** and Incident Investigation Advanced & HSE Reporting.

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 course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 15th of September 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Understanding Maintenance & Reliability Understanding Maintenance • Understanding Reliability • Maintenance Cost-Facts & Figures • Maintenance & Profitability
0930 – 0945	Break
0945 – 1015	Understanding Maintenance & Reliability (cont'd) Maintenance Development Over Time • Maintenance Policies • Maintenance & Reliability Best Practices
1015 – 1145	Equipment Failure Process & Causes What is a Failure? • What is a Failure Mode? (FM) • What is a Failure Mechanism? • The P-F Curve Concept • How Failures Appear? • Equipment Failure Patterns • Fundamental Causes of Failures
1145 – 1215	Equipment Criticality Assessment What is Equipment Criticality Assessment? • Why Do You Need ECA? • What Makes an Equipment Critical?
1215 – 1230	Break
1230 – 1330	Equipment Criticality Assessment (cont'd) The Importance of Equipment Criticality • ECA Methodology • ECA Process
1330 – 1420	Maintenance Planning & Scheduling (MPS) MPS – Introduction • MPS – Objectives • Maintenance Planning & Scheduling • MPS – Benefits • Maintenance Planning – Definition • The Role of Maintenance Planning • The Practical Result of Planning • How Many Planners? • How to Choose a Planner? • Where Planning Fits into Maintenance • The Planner Responsibilities
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2: Monday, 16th of September 2024

0730 – 0930	Maintenance Planning & Scheduling (MPS) (cont'd) What is Scheduling? • Scheduling • Scheduling Pros • Scheduling Issues • Scheduling Considerations • Annual Work Schedule • Weekly Planning Schedule • Daily Work Schedules • Work Execution Package • Maintenance Work Process Flow • Maintenance Events – PMs • Breakdowns • Corrective Work
0930 – 0945	Break
1100 – 1150	Maintenance Planning & Scheduling (MPS) (cont'd) Risk Assessment Needed to Establish Need & Performance Priority • Poor Prioritization Causes • Prioritization System Considerations • Equipment Criticality • Task Effect • Priority Matrix When the Work Should Be Done • Another Approach for Assessing Risk & the Need to Perform Work • Probability Considerations • Consequence Considerations, What is the Consequence Should the Event Occur? • Example Work Selection Matrix • Another Approach • Work Selection Summary





1150 – 1215	Maintenance Planning Process Maintenance Planning & Scheduling • The Planning Process Step by Step • The Planning Process • Concepts for Planning Different Types of Jobs • The Scheduling Process
1215 – 1230	Break
1230 – 1420	Maintenance Planning Process (cont'd) Scheduling Techniques • Scheduling Pros • Scheduling Issues • Scheduling Considerations • Annual Work Schedule
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, 17th of September 2024

0730 – 0930	Maintenance Planning Process (cont'd) Weekly Planning Schedule • Daily Work Schedules • Work Execution Package • MPS Process “Work Execution & Close Out” • Maintenance Planning & Scheduling
0930 – 0945	Break
0945 – 1100	Maintenance Planning Process (cont'd) Execution • Close-out • Calculating Craft Performance • Craft Service Quality • MPS Process “Analyze”
1100 – 1215	Maintenance Planning Process (cont'd) MPS – Supporting Systems • Typical KPIs – Planning • Performance Indicator Characteristics & Requirements • Performance Parameter Hierarchy • Business Results Indicators Typically Solomon Indicators
1215 – 1230	Break
1230 – 1420	Maintenance Planning Process (cont'd) Refining Business Results Indicators Solomon – Reliability • Refining Business Results Indicators Solomon – Maintenance • Work Management KPIs • Maintenance Effectiveness Metrics • Equipment Specific Indicators
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, 18th of September 2024

0730 – 0845	Maintenance Planning Process (cont'd) Pump MTBF Targets • Work Force Utilization Metrics • Maintenance Backlog • Maintenance Work Backlog Management • MPS Process “Continuous Improvement”
0845 – 0930	Proven Turnaround Practices The Nature of Turnaround/Shutdown Project Management • The Environment in which a Turnaround/Shutdown Takes Place • Turnaround/Shutdown Success Factors • More Success Factors • Similar Planning Approach to Projects • Elements of a Turnaround/Shutdown • Turnaround/Shutdown Toolkit • The Work Breakdown Structure (WBS) & the Organization Breakdown Structure (OBS) • Identifying the Work • General Shutdown/Turnaround Checklist • Planning a Plan • Milestone Plan • Milestone Chart • Work Scope





0930 – 0945	Break
0945 – 1100	Proven Turnaround Practices (cont'd) Budgets & Cost Control • Projects • Materials • Process Operations • Pre-Shutdown/Pre-Turnaround Reviews • Safety • Typical Safety Questions that should be Asked • Inspection • Contracting • Quality: What is Required? • Quality Control Plan (QCP) • Quality Control Plan (QCP) Inspection Report • Quality Control Sheet • Risk Management • Shutdown/Turnaround Practices Discussion
1100 – 1215	Spare Parts Planning & Inventory Management Spare Parts – Introduction • Why Do We Hold Spares? • Spare Parts Inventory – Introduction • Inventory Control – Effect on Maintenance • Inventory – Components • Spare Parts Inventory – Cost • Cost of the Spare Part • Cost of the Spare Part Ordering • Cost of Storage
1215 – 1230	Break
1230 – 1420	Spare Parts Planning & Inventory Management (cont'd) Cost of Stock Out • Spare Parts Inventory – Analysis • FSN Analysis • SDE Analysis • Inventory Reorder Point • Inventory Economic Order Quantity (IEOQ) • Economic Order Quantity (EOQ) • Tips to Improve Spare Parts Management • Spare Parts Inventory Management
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, 19th of September 2024

0730 – 0930	Spare Parts Planning & Inventory Management (cont'd) Measuring Performance – Storeroom Metrics • Inventory Management – Case Study • Inventory Management • Spares Management (1) – Fast Moving Spares • Spares Management (2) – Slow Moving Spares • Spares Ranking • Inventory Optimization – Best Practice • Inventory Cost Saving • Inventory Cost
0930 – 0945	Break
0945 – 1215	Computerized Maintenance Management Systems (CMMS) CMMS – Introduction • CMMS – What Returns can be Expected? • What Should CMMS Do?
1215 – 1230	Break
1230 – 1300	Computerized Maintenance Management Systems (CMMS) (cont'd) CMMS – Basic Functions • CMMS - ROI
1300 – 1315	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1315 – 1415	COMPETENCY EXAM
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”.



Course Coordinator

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