COURSE OVERVIEW HE0890

Mobile & Overhead Crane Operation & Troubleshooting

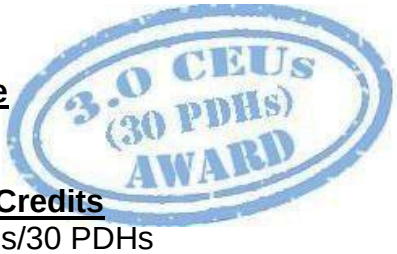
Course Title

Mobile & Overhead Crane Operation & Troubleshooting

Course Date/Venue

Session 1: May 25-29, 2025/Crowne Meeting Room, Crowne Plaza Al Khobar, KSA

Session 2: September 28-October 02, 2025/ Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



Course Reference

HE0890

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes practical sessions and demonstration where participants carryout overhead crane operations. Theory learnt in the class will be applied using overhead crane through hands-on practical sessions.

The course will discuss the causes and results of crane accidents and understand the responsibilities of operator, rigger and supervisor; identify the different types of components and terminology of mobile and overhead cranes; provide knowledge on how mobile and overhead cranes are rated; and how to interpret and use load charts.

Participants of the course will be able to implement safe operating practices and procedures including pre-lift considerations; perform pre-operational inspections; prepare for a critical lift; conduct pick and carryout operations safely; perform multi-crane lifts; apply the procedures for boom assembly/disassembly; determine correct hand signals and responsibility of signal persons; implement the procedures for working cranes around power lines and avoid crane contact with power lines; comply with OSHA and ANSI/ASME safety requirements, especially when hoisting personnel with cranes; practice various rigging skills including wire rope, slings, chain, rigging hardware, lifting devices, calculating sling load, reeving, determining load weight, safe rigging practices and procedures; and prepare lift plan.

Course Objectives

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

- Apply a comprehensive knowledge and skills on the operation of mobile and overhead cranes and solve practical lift problems in a professional manner
- Discuss causes and results of crane accidents and understand the responsibilities of operator, rigger and supervisor
- Identify the different types of components and terminology of mobile & overhead cranes
- Acquire knowledge on how mobile & overhead cranes are rated and how to interpret and use load charts
- Implement safe operating practices and procedures including pre-lift considerations
- Perform pre-operational inspections and prepare for a critical lift
- Conduct pick and carry operations safely and perform multi-crane lifts
- Apply the procedures for boom assembly/disassembly and determine correct hand signals and responsibility of signal persons
- Implement the procedures for working cranes around power lines and avoid crane contact with power lines
- Comply with OSHA and ANSI/ASME safety requirements, especially when hoisting personnel with cranes
- Practice various rigging skills including wire rope, slings, chain, rigging hardware, lifting devices, calculating sling load, reeving, determining load weight, safe rigging practices and procedures and how to prepare lift plan

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 mobile and overhead crane operation and troubleshooting for crane operators, rigging supervisors and site foremen. Further, the course is suitable for project managers, engineers and HSE staff.

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.

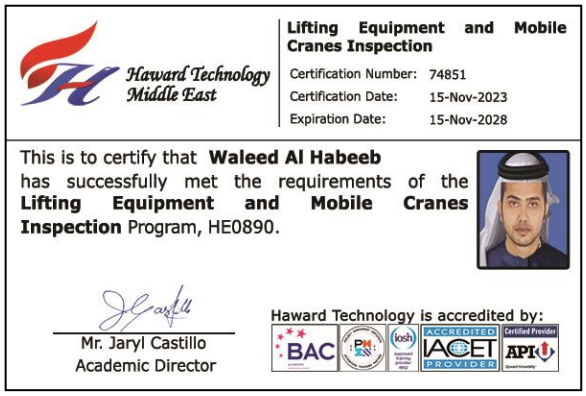
Course Certificate(s)

(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. 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 Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 15-Nov-23

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE0890	Lifting Equipment and Mobile Cranes Inspection	November 11-15, 2023	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **30**

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Accredited 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 1-2018 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 1-2018 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 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.

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

Certificate Accreditations

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**. 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.

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 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. Raymond Tegman is a **Senior HSE Consultant** and **Lifting & Rigging Engineer** with extensive experience within the **Oil & Gas**, **Petrochemical** and **Refinery** industries. His wide expertise widely covers in the areas of **Fire & Explosive Hazards**, **Fire** Prevention & Protection, **H2S**, **Firefighting** Techniques, **Fire** Precautions, **Fire Extinguishers**, **Heavy Lifting & Transportation** Techniques, **Lifting Operations** & **Lifting Equipment**, **Excavation & Lifting** Operations, Machinery & Hydraulic **Lifting Equipment**, **Lifting Tackles** Inspection, **Rigging & Slinging** Safety Rules, Fundamentals of **HSSE Audit & Inspection**, **HSSE Analysis**, **HSSE Emergency Response & Crisis Management** Operations, **HSE** Rules & Regulations, Process Safety Management (**PSM**), Process Hazard Analysis (**PHA**), Techniques, **HAZOP**, **HSE** Risk, **Pre-Start-up Safety** Reviews, **HSE Risk** Identification, Assessments & Audit, **HSE Risk** Assessment & Management Concepts, **HSE Management** Policy & Standards, **Confined Space** Safety, **Confined Space** Entry, **Fall** Protection, **Work Permit & First Aid**, **Safe Driving Skills**, **Defensive Driving**, **Rescue** from **Height**, **Confined Space & Rope Rescue**, **Donning & Doffing** of **SCBA**, **Gas Testing & Confined Space Entry** Requirement, Handling **Hazardous Chemicals**, Spill Containment, **Fire** Protection, **Incidents & Accidents** Reporting, **HSEQ** Audits & Inspection, **HSEQ** Procedures, **Environmental** Awareness, **Waste** Management Monitoring, **Emergency Planning**, **Emergency** Management, **Working at Heights**, **Root Cause Analysis**, **Confined Space Entry**, **Quantitative Risk Assessment** (**QRA**), Hazardous Materials & Chemicals Handling, Safety Precaution & Response Action Plan, **Hazard & Risk** Assessment, Task Risk Assessment (**TRA**), **Incident Command**, **Accident & Incident Investigation**, **Emergency Response Procedures**, Job Safety Analysis (**JSA**), Behavioural Based Safety (**BBS**), **Fall Protection**, **Work Permit & First Aid**, Lock-out/Tag-out (**LOTO**), **Emergency Response**, **Construction** Supervision, **Scaffolding** Inspection, **HAZCHEM**, Manual Material Handling, **Road Traffic** Supervision, ISO 9001, ISO 31000 and OHSAS 18001.

During his career life, Mr. Tegman has gained his practical and field experience through his various significant positions and dedication as the **Operations Manager**, **Safety & Maintenance Manager**, **Safety Manager**, **Road/Traffic Supervisor**, **Assessor/Moderator**, **SHE Practitioner**, **Senior Instructor/ Trainer**, **Technical Trainer**, **Safety Consultant**, **Safety Advisor**, **Safety Officer** and **Liaison Officer** from Zero Harm, SHRA Training & Services (Health & Safety), Road Crete, Balwin Property Development, DEME International, Gladstone Australia, Godavari Gas Pipeline and New Castle NCIG.

Mr. Tegman has a **Bachelor's degree** in **Chemical Engineering**. Further, he has held a **Senior Certificate**, a **Certified Instructors/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** of **ILM** and has delivered numerous 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

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0900	***Introduction*** *ASME B30.5 ● Mobile crane types ● BS7121*
0900 – 0930	***Crane Nomenclature*** *Boom ● Jig ● Outriggers ● Sheaves ● Block ● Drum, etc.*
0930 – 0945	*Break*
0945 – 1030	***Defining Areas of Operation*** *Front ● Sides ● Rear ● Reasons*
1030 – 1130	***Leveling and Stability***
1130 – 1230	***General Information on Wire Rope*** *Wire Rope Lays ● IWRC Rope ● Identifying Rope Damage*
1230 – 1245	*Break*
1245 – 1400	***Use of Load Chart***
1400 – 1420	***Line Speed & Line Pull*** *SAE J881*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0830	***Reeving*** *Boom Noze Sheaves ● Effect Of Multi-Lines on Load Capacity and Hook Velocity*
0830 – 0930	***Proper Interpretation of International Crane Hand Signals***
0930 – 0945	*Break*
0945 – 1030	***Correct Method of Setting the Machine on Outriggers*** *Lift Site Preparation ● Proper Leveling of Cranes ● Cribbing ● Ground Bearing Pressures*
1030 – 1130	***Solving Practical Lift Problems Using Load Chart***
1130 – 1245	***Video Presentation*** *Haward VME-12, "Rigging and Lifting with Small Hydraulic Cranes"*
1245 – 1300	*Break*
1300 – 1320	***OSHA General Checklist for this Type of Machine***
1320 – 1345	***Operation of Hydraulic Cranes vs. Lattice Boom Cranes***
1345 – 1420	***Video Presentation*** *Haward VME-14, "Rigging and Lifting with Mobile Construction Equipment"*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0830	***Correct Methods of Load Blocks and Rigging***
0830 – 0930	***Simultaneous Operation of Several Crane Functions***
0930 – 0945	*Break*
0945 – 1030	***Solving Stress Problems with Wire Rope***
1030 – 1130	***Maximum Permissible Radius of a Given Crane***

1130 – 1245	***The Use of Personnel Baskets*** *Construction ● Standards ● Types*
1245 – 1300	*Break*
1300 – 1345	***"Tracking" Loads***
1345 – 1420	***Video Presentation*** *Haward VME-13, "Tips from the Pros – Rigging and Lifting"*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0830	***Transportation to Site for Practice on Mobile Crane***
0830 – 0930	***Practical Session 1*** *Identification of All Cab Controls (Upper and Lower) and Instruments, Including Warning Devices ● Set Up Crane for Traveling, Check Oil, Fuel and etc. Before Starting ● Axle Lockout Operation*
0930 – 0945	*Break*
0945 – 1100	***Practical Session 2*** *When and how to Use Crab and Cramp Steering ● Pick and Carry Operation (Load Chart, Tire Pressure, Outrigger, etc.) ● Positioning Crane to Make a Pickup (Cribbing, Outriggers, Levelling, etc.)*
1100 – 1200	***Practical Session 3*** ***Crane Operation*** *(with Small Load 4,000 lbs., Safety First, Swinging, Telescoping, Two Blocking, by Telescoping and Booming Down, Hoisting, Booming, Hand Signals)*
1200 – 1245	***Practical Session 4*** ***Crane Operation (cont'd)*** *(Load Chart, Mostly in Classroom, Boom Angle Indicator, Reeving, Attachments, Manuals and Jibs, Cable, Simulate a Concrete Pour)*
1245 – 1300	*Break*
1300 – 1345	***Practical Session 5*** ***Crane and Configuration on Outriggers*** *(The use of Personnel Baskets, Cribbing, Outrigger Extended, Leveling Machine, HOW-TO-BOOM)*
1345 – 1420	***Practical Session 6*** ***Crane and Configuration on Outriggers (cont'd)*** *(WINCH, PICK AND CARRY)*
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*

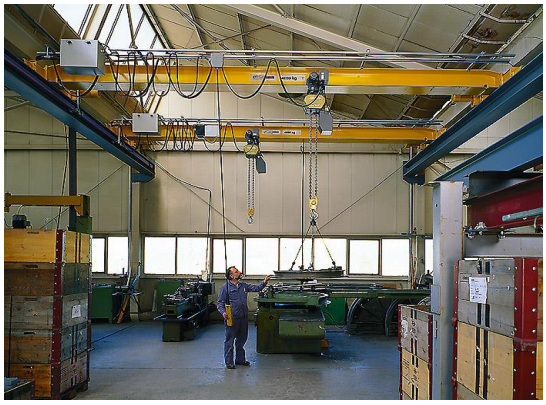
Day 5

0730 – 0830	***Crane Inspections*** *Inspecting Slings, Chains, Shackles, etc. ● Inspection Checklist*
0830 – 0930	***Calculation of Weights of Materials such as Steel, Concrete, etc.***
0930 – 0945	*Break*
0945 – 1030	***Proper Crane Operation and Avoiding Sudden Stops*** *BS7121 Parts 1 and 3 ● Maintenance Checklists*
1030 – 1130	***Crane Shutdown Procedures***
1130 – 1230	***Crane Lift Plan Method and Risk Assessment*** *Safety Management*

1230 – 1245	*Break*
1245 – 1300	***Class Forum*** *Questions and Answers Session*
1300 – 1315	***Course Conclusion***
1315 – 1415	***COMPETENCY EXAM (Theory & Practice)***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

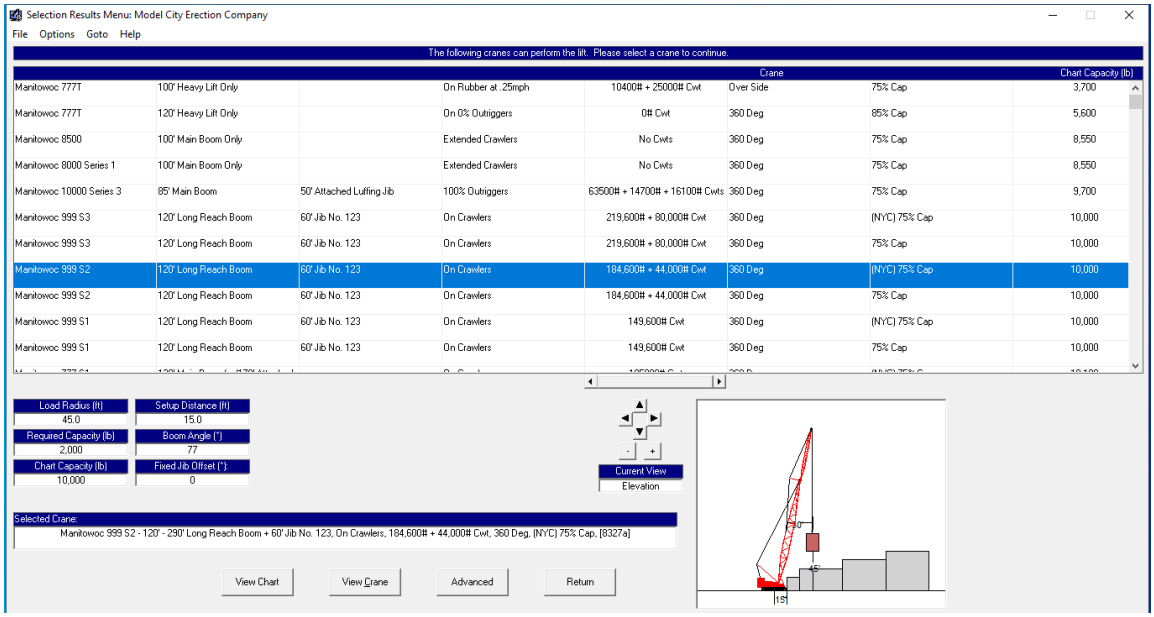
Practical Sessions/Site Visit

Site visit will be organized during the course for delegates to practice the theory learnt: -



Simulators (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 one of our state-of-the-art simulators “Compu-Crane” simulator.



Compu-Crane

Course Coordinator

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