



COURSE OVERVIEW HE0440
Lifting & Rigging Equipment

Selection, Sizing, Applications, Operation, Diagnostic Testing, Troubleshooting & Maintenance

Course Title

Lifting & Rigging Equipment: *Selection, Sizing, Applications, Operation, Diagnostic Testing, Troubleshooting & Maintenance*

Course Date/Venue

December 16-20, 2024/ Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference

HE0440

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 lifting and rigging operations. Theory learnt in the class will be applied using a mobile crane and assorted rigging through hands-on practical sessions.



The absence of good lifting practices contributes to a large percentage of material handling accidents. This course, through classroom problems and practical sessions, will enhance the competencies of engineers and other technical staff for reviewing and approving lifting plans for various lifting equipment. The course will instruct attendees in determining the correct size and type of lifting equipment required to safely perform lifting operations.



This course is designed to ensure that all personnel involved in rigging and lifting operations have an understanding of the requirements pertaining to rigging operations, the development and approval of the lifting plans, the requirements for pre-use inspection and discard criteria of lifting equipment, the safe working procedures for rigging and to ensure delegates can use lifting equipment safely without exceeding the load limit imposed on them.

The course will train attendees how to prepare, review and approve the lifting plans. It will guide participants on the use and inspection of lifting equipment, hazards and controls required for static and mobile lifting equipment, lifting procedures, colour coding and risk assessment.

The course will discuss the various types of static and mobile lifting equipment including cranes, wire ropes, slings, hitches, shackles, hooks, eye bolts, turnbuckles, spreader beams, man-baskets, sheares, blocks, drums, chains, hoists, jacks and rollers.

The course will end up by a competency exam (theory & practice) to certify successful participants as “Certified Lifting & Rigging Officer/Inspector”.

Course Objectives

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

- Get certified as a “*Certified Lifting & Rigging Officer/Inspector*”
- Apply proper techniques and procedures in lifting equipment management
- Discuss the heavy lift philosophy and procedures as well as the applicable safety rules during the lifting operations
- List the colour codes used at the sites and discuss the reasons and advantages of using colour coding for lifting equipment
- Apply the certification requirements for Lifting Plan Engineers
- Develop, review and approve lift plans for various lifting operations
- Apply the methods of pre-lift planning/lifting plans including the lift plan requirements, module lift and ANSI/OSHA standards
- Inspect the various types of lifting equipment including wire rope slings, polyester webbing, round (endless) sling, chains, etc
- Recognize the requirements for mobile crane safety including crane signals, crane identification, hoisting systems and crane safety features
- Carryout risk assessment methodology and identify the various hazards connected to lifting equipment

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 provides an overview of all significant aspects and considerations of lifting and rigging equipment for construction engineers, lifting equipment engineers, rigging engineers, project engineers, plant engineers, maintenance engineers, safety program managers and all senior personnel involved in lifting operations.

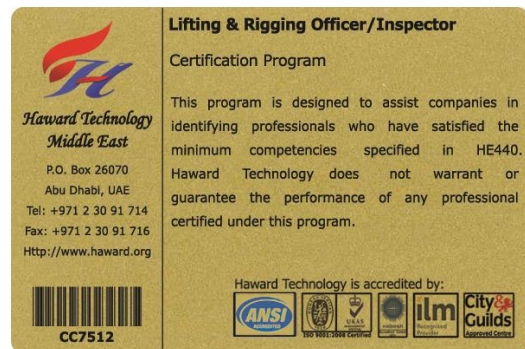
Course Certificate(s)

(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 Lifting & Rigging Officer/Inspector*”. 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 *



Page 1 of 1

Haward Technology Middle East
Continuing Professional Development (HTME-CPD)

CEUs

CEU Official Transcript of Records

TOR Issuance Date: 16-Nov-17

HTME No. PAR21930

Participant Name: Ismail Al Rashedi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE440	Certified Lifting & Rigging Equipment: <i>Lifting Tackles Inspection License/Relicense</i>	November 12-16, 2017	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **3.0**

TRUE COPY



Maricel De Guzman
Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102, 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.

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 | Fax: +971 2 3091 716 | 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:-

- 
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.

- 
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. Karl Thanasis, PEng, MSc, MBA, BSc, is a **Senior Mechanical & HSE Consultant** with over **30 years** of **Onshore & Offshore** experience within the **Oil, Gas, Refinery** and **Petrochemical** industries. His wide expertise includes **Crisis Management & Incident Control**, Incident Command System (ICS), **Risk Assessment**, **IOSH Managing Safely**, **Job Safety Analysis**, **Waste & Environmental Management**, **Health & Safety Management**, **Technical Rope Rescue**, **Crane, Forklift, Scaffolding, Lifting, Rigging, Slings, Banksman, Manual Handling, Lifting Equipment Inspection, Heavy Lifting Operations & Management, Overhead Crane** as well as installation and erection of the **Cooling Towers, Fired Heaters, Plastic Pipelines** and Steel Structured Buildings. He is also well-versed in mechanical rotary drilling, mud pumping, pipe jointing, pressure hydro-testing, high pressure water jetting, remote cleaning, pressure hydro-testing, sulphur processing, **ROV** and other **heavy equipment operations**. Further, he has a very strong **Technical and Site Managerial Leadership Skills** including **Production Planning, Scheduling, Construction Administration, Safety, Project Budget Development** and **Accountability**. Currently, he is the **Off-Shore Project Manager** of **DCN** in **Germany**.

Mr. Thanasis has acquired his thorough and practical experience as the **Project Manager, Plant Manager, Area Manager - Equipment Construction, Construction Superintendent - Fired Heaters, Project Engineer** and **Thermal Design Engineer**. He has worked in various companies worldwide in the **USA, Germany, England** and **Greece** and that include **Unilever, Vitcom Engineering, J/V Eamt, Asprofos Engineering Company** and **Procon** to name a few.

Mr. Thanasis is a **Registered Professional Engineer** in the **USA** and **Greece** and has a **Master** and **Bachelor** degrees in **Mechanical Engineering** with **Honours** from the **Purdue University** and **SIU** in **USA** respectively as well as an **MBA** from the **University of Phoenix** in **USA**. Further, he is a **Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** and a **Certified Instructor/Trainer**.

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 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: Monday, 16th of December 2024

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Heavy Lift Philosophy & Procedures <i>Types of Cranes • Crane Components • Steps in Crane Setup on Sites • General Lifting Procedures</i>
0930 – 0945	<i>Break</i>
0945 – 1100	Heavy Lift Philosophy & Procedures (cont'd) <i>Marking of Lifting Equipment • Sling Loads & Angles • Establishing Load Weight & Center of Gravity • Hand Signals</i>
1100 – 1230	Safety & Lifting <i>Health & Safety Legislation • Inspection Definitions</i>
1230 – 1245	<i>Break</i>
1245 – 1420	Safety & Lifting (cont'd) <i>Safe Use of Wire Ropes • Safe Use of Chain Slings • Safe Use of Shackles & Eyebolts • Safe Use of Beam Clamps & Trolleys</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: Tuesday, 17th of December 2024

0730 – 0930	Colour Coding <i>Reasons of Colour Coding for Lifting Equipment • Colour Codes at Site</i>
0930 – 0945	<i>Break</i>





0945 – 1100	Colour Coding (cont'd) Process of Changing the Colour Code • Procedure for Equipment that Arrive on Site without the Right Colour Coding
1100 – 1230	Certification Requirement/Lifting Plan Engineers Certification Necessity • Load Planning • Lifting Plan Engineers • Hook-up (Rigging)
1230 – 1245	Break
1245 – 1420	Certification Requirement/Lifting Plan Engineers (cont'd) Load Signalling • Hoisting Equipment • Crane Operators
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3: Wednesday, 18th of December 2024

0730 – 0930	Pre-Lift Planning/Lifting Plans Lift Plan Requirements • Critical Lift • Critical Lift Plan Analysis • Calculating Soil Bearing Capacity • Crane Weight
0930 – 0945	Break
0945 – 1100	Pre-Lift Planning/Lifting Plans (cont'd) Load Calculation • Soil Bearing Load • Crane Set-Up Summary
1100 – 1230	Pre-Lift Planning/Lifting Plans (cont'd) Fin Fan Lift • Heat Exchanger Lift • Module Lift • Fractionator Lift • ANSI/OSHA Standards
1230 – 1245	Break
1245 – 1420	Inspection of Lifting Equipment Wire Rope Slings • Polyester Webbing Sling • Round (Endless) Sling • Chains • Shackles • Eyebolts • Plate Clamps
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: Thursday, 19th of December 2024

0730 – 0930	Inspection of Lifting Equipment (cont'd) Hooks • Chain blocks • Pull Lines • Tirfors • Beams Clamps / Pad Eyes • Sheave (Snatch) Blocks • Air / Hydraulic Winches
0930 – 0945	Break
0945 – 1100	Mobile Cranes Crane Signals • Operational Aids • Crane Identification • Crane Types • Hoisting Systems • Site Preparation • Set-up & Assembly • Boom Inspection & Repair • Crane Gantry • Crane Jibs • Wire Rope Factors
1100 – 1230	Mobile Cranes (cont'd) Crane Stability • Outriggers Position • Load Charts • Conditions Affecting Capacity • Traveling with Load • Telescoping Booms • Boom Contact Hazard • Crane Log Books • Crane Inspection • Crane Operation • Crane Safety Features
1230 – 1245	Break
1245 – 1420	Risk Assessment Methodology Fatality Reports • What Causes Accidents? • Personal Lifting Techniques • Personal Safety Equipment • Special Considerations
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 Four</i>

Day 5: Friday, 20th of December 2024

0730 – 0930	Practical Lifting & Rigging Training using Live Crane
0930 – 0945	Break
0945 – 1100	Practical Lifting & Rigging Training using Live Crane (cont'd)
1100 – 1230	Practical Lifting & Rigging Training using Live Crane (cont'd)
1230 – 1245	Break
1245 – 1300	Practical Lifting & Rigging Training using Live Crane (cont'd)
1300 – 1315	Course Conclusion
1315 – 1415	COMPETENCY EXAM (Theory & Practical)
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Practical Sessions/Site Visit

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



Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org