

**COURSE OVERVIEW HE0006-2D**  
**PHA Leadership and Certification**

**Course Title**

PHA Leadership and Certification

**Course Reference**

HE0006-2D

**Course Duration/Credits**

Two days/1.2 CEUs/12 PDHs

**Course Date/Venue**

Session(s)	Date	Venue
1	January 08-09, 2024	Cheops Meeting Room, Radisson Blu Hotel, Istanbul Sisli, Turkey
2	April 15-16, 2024	Jubail Hall, Signature Al Khobar Hotel, Al Khobar, KSA
3	June 15-16, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
4	October 21-22, 2024	Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE



**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.***

Old approaches to safe design in the process industry relied on the application of codes of practice and the design was usually based upon experience from specialists and operators in the industry. Such methods were able only to take into account problems and accidents that had already happened. With introduction of new technologies, unconventional design, complex plants and short operating experience, a proper PHA study is now a mandatory tool to identify potential hazards and operability problems.

PHA is a systematic multidisciplinary team study intended to identify and analyze the significance of potential process hazards and make initial recommendations for eliminating hazards, for reducing the consequences of potential accidents and for improving general facility safety.

PHA methods are used for new plants as well as for modifications to existing design. The methods have been developed primarily for the process industry and have been applied in great scale in the Oil and Gas sector. However, the PHA techniques are now applied with success for other industries such as offshore construction, power and water projects, space and military industries, and environment studies.

This course is designed to provide the participants with the knowledge and group leadership skills to lead teams in effective Process Hazards Analysis (PHA) studies. The course is based on OSHA 29CFR Part 1910 Process Safety Management (PSM) regulations and was developed using instruction techniques and audio-visual materials specifically designed for engineers and supervisors. There is a focus on developing a practical understanding of what it takes to plan and lead a successful study and on practicing new skills. Participants will be provided with comprehensive training and resource materials.

### **Course Objectives**

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

- Get certified as a “*PHA Leader*”
- Apply the methodology of the PHA review techniques in general and the HAZOP technique in particular based on the International Standard IEC 61882 and identify the role of the independent chairman and the HAZOP team
- Determine the minimum Engineering Documents and drawings required to complete a satisfactory HAZOP report and illustrate the structure and content of such Report
- Apply the HAZOP tool to process design of existing or new facilities including interface, start up and commissioning of a plant
- Assess the risk level/criticality associated with control loop/equipment failure and practice the major techniques for hazard identification
- List the responsibilities involved in the PHA leadership and the skills necessary for leading PHA studies
- Practice the various PHA techniques including What-If, HAZOP and FMEA using real life cases and use commercial software as useful tools in the facilitation of Process Hazards Analysis

### **Who Should Attend**

This course provides an overview of all significant aspects and considerations of PHA for those who are involved in the management, engineering (design, process, chemical, facilities, instrumentation and control), operations and safety of process operations. Engineers, safety/environment personnel, plant operators, area managers, projects and maintenance personnel will benefit from the practical approach presented in this course.

### **Training Methodology**

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Workshops & Work Presentations
- 30% Case Studies & Practical Exercises
- 20% Software, Simulators & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons

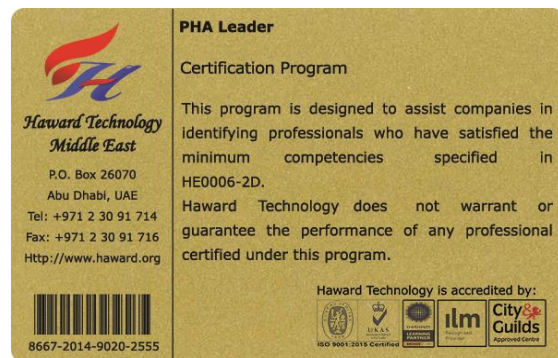
**Course Certificate(s)**

- (1) Internationally recognized Wall Competency Certificates and Plastic Wallet Card Certificates 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 PHA Leader*”. 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-21

**HTME No.** 3558-6717-5364-9527

**Participant Name:** Abdulsatar Al Otaibi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE0006-2D	PHA Leadership and Certification	13 Nov-14 Nov, 2021	12	1.2

**Total No. of CEU's Earned as of TOR Issuance Date** **1.2**

**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), 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.

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 **1.2 CEUs** (Continuing Education Units) or **12 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. Attalla Ersan, PEng, MSc, BSc, is a Senior HSE Consultant with over 35 years of extensive experience within the Project Safety Oil & Gas, Hydrocarbon and Petrochemical industries. His expertise widely covers the areas of Accident Investigation, Health & Safety, Occupational Safety & Security, Safety Risks in Urea Plants, Advanced Incident Investigation & Confidential Reporting, Facilities Management, Environmental Health & Safety Management, Products Specification, HSSE Performance & Effectiveness, HAZOP Facilitation, Hazardous Materials, Material Safety Data Sheets (MSDS), Hazardous Wastes, Hazards of Chemical Incidents, Shipping Configurations, Respiratory Protection, Protective Clothing, Donning and Doffing Procedures, Boiler & Steam System Management, Waste Heat Recovery, Boiler Plant Safety, Boiler Controls, Steam Distribution Systems, Steam Traps, Pollution Control, Cracked Gas Compressor, Reboilers, Sulphur Unit Air Blower, Steam Turbine, Distillation Columns, Gas Treatment, Waste & Water Treatment Units, Process Plant Operations, Process Plant Startup & Operating Procedure, Ethylene & Vinyl Chloride, Ethane Cracking Furnaces Operations, Ethylene & Polyethylene Operation, Acid Gas Treatment, Sulphur Recovery, EDC & VCM, Caustic Soda Storage, Debottle-necking, Loss Prevention, Process Operation, Safety Audits, Process Engineering, Root Cause Investigations, Pyrolysis Cracking, Gas Plant Commissioning, Loss Prevention Techniques, Occupational Hazards, Hot Tapping & Tie-Ins, Pre-Start-Up Safety Review (PSSR), Standard Operating Procedure (SOP), Emergency Operating Procedure (EOP), Permit to Work Systems (PTW), Hazard and Operability (HAZOP) Study, Process Hazards Analysis (PHA), Consequence Analysis Application, Gas Detectors Operation, Accident/Incident Investigation (Why Tree Method), Occupational Exposure Assessment, Fire Fighting & First Aid, Environmental Management, Basic Safety Awareness, Steam Cracking, Steam Generation, Binary Fractionators Operations, Tanks Farm & Metering Station Techniques, Gas Treatment, Sulphur Recovery Process Unit Operation, Permit to Work System and Emergency Response Planning.** Further, he is also well-versed in Project Management, Human Resources Consultancy, Manpower Planning, Job Design & Evaluation, Recruitment, Training & Development and Leadership, Creative Problem Solving Skills, Work Ethic, Job Analysis Evaluation, Training & Development Needs, Bidding & Tendering, Technical Report Writing, Supervisory Leadership, Effective Communication Skills and Total Quality Management (TQM). He is currently the **CEO of Ersan Petrokimya Teknoloji Company Limited** wherein he is responsible for the design and operation of Biogas Process Plants.

During his career life, Mr. Ersan has gained his practical and field experience through his various significant positions and dedication as the **HSE Field Engineer, Safety Engineer, Policy, Organization & Manpower Development Head, Training & Development, Head, Ethylene Plant – Pyrolysis Furnace Engineer, Production Engineer, HSE Advisor, Process Training Coordinator, Ethylene Plant Shift Supervisor, Ethylene Plant Panel & Fit Operator, Process Training & Development Coordinator, Technical Consultant, and Instructor/Trainer** for Qatar Vinyl Company Limited and Qatar Petroleum Company (QAPCO).

Mr. Ersan is a **Registered Professional Engineer** and has a **Master's degree of Education in Educational Training & Leadership** and a **Bachelor's degree of Petrochemical Engineering**. Further, he is a **Certified Instructor/Trainer** and has delivered numerous trainings, courses, workshops, conferences and seminars internationally.

**Accommodation**

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

**Course Fee**

Istanbul	<b>US\$ 3,250</b> per Delegate + <b>VAT</b> . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Al Khobar	<b>US\$ 2,750</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	<b>US\$ 2,750</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Abu Dhabi	<b>US\$ 2,750</b> per Delegate + <b>VAT</b> . 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 course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

**Day 1**

0730 - 0800	<i>Registration &amp; Coffee</i>
0800 - 0815	<i>Welcome &amp; Introductions</i>
0815 - 0830	<b>PRE-TEST</b>
0730 - 0900	<b>HAZOP</b> <i>Workshop # 1: HAZOP Study</i>
0900 - 1030	<b>HAZOP (cont'd)</b> <i>Workshop # 1: HAZOP Study (cont'd)</i>
1030 - 1045	<i>Break</i>
1045 - 1130	<b>FMEA</b> <i>Description • Characteristics • Typical Checklist • Guide Words</i>
1130 - 1230	<b>FMEA</b> <i>Workshop # 2</i>
1230 - 1245	<i>Break</i>
1245 - 1330	<b>Human Factors Toolkit</b>
1330 - 1400	<b>Human Factors</b> <i>Workshop # 3</i>
1400 - 1430	<b>What If Method</b> <i>Description • Characteristics • Definitions • Guidance</i>
1430	<i>Lunch &amp; End of Day One</i>

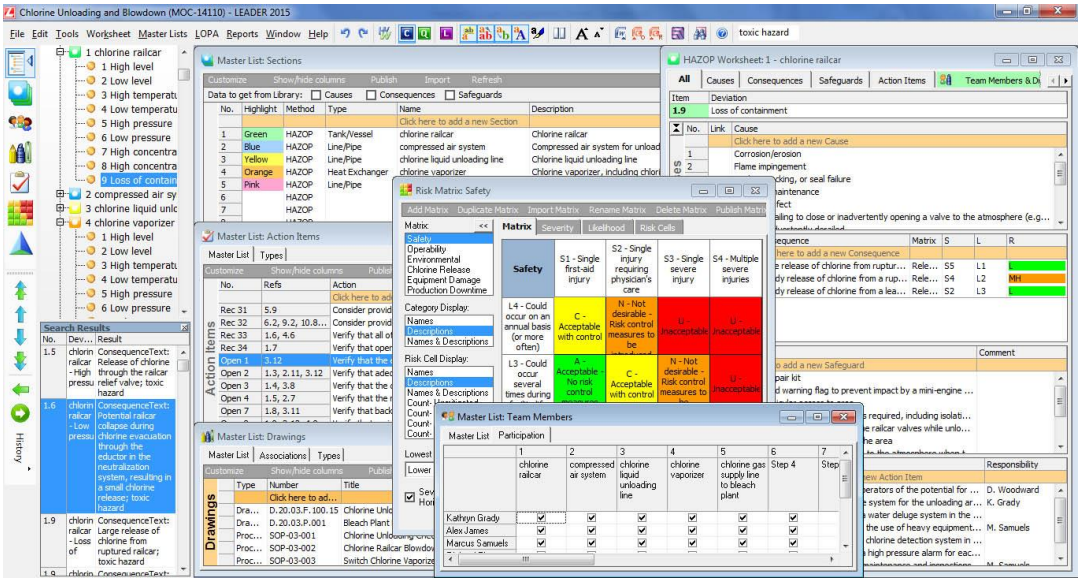
**Day 2**

0730 - 0815	<b>Facility Siting</b>
0815 - 1015	<b>Facility Siting</b> <i>Workshop #4</i>
1015 - 1030	<i>Break</i>

1030 - 1130	<b>Suggested Guide</b> PHA Steps
1130 - 1215	<b>Summary</b> PHA Flowchart • Organizational Concepts • Review Overall Steps
1215 - 1230	Break
1230 - 1400	<b>COMPETENCY EXAM for HAZOP Leaders</b>
1400 - 1415	Presentation of Course Certificates & Closing of Course
1415 - 1430	Review & Consultation with Instructor
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 our state-of-the-art "Haward PHA/HAZOP" Software.



The screenshot displays the Haward PHA/HAZOP software interface. Key components visible include:

- Master List Sections:** A table listing sections with columns for No., Highlight, Method, Type, Name, and Description. Sections are color-coded (Green, Blue, Yellow, Orange, Pink).
- Risk Matrix Safety:** A grid showing risk levels (S1-S4) for different hazard categories (Safety, Environmental, Chlorine Release, Equipment Damage, Production DownTime).
- Master List: Action Items:** A table with columns for No., Refs, and Action.
- Master List: Drawings:** A table listing drawings with columns for Type, Number, and Title.
- Master List: Team Members:** A participation matrix for team members across different steps of the process.
- HAZOP Worksheet:** A detailed view of a specific hazard analysis, including causes, consequences, and safeguards.

**Haward PHA/HAZOP**

### Course Coordinator

Kamel Ghanem, Tel: +971 2 30 91 714, Email: [kamel@haward.org](mailto:kamel@haward.org)