COURSE OVERVIEW HE2019
Certified HAZOP Member

Course Title
Certified HAZOP Member

Course Date/Venue
December 21-25, 2025/Ruby Meeting Room, Dusit Doha Hotel, Doha, Qatar

Course Reference
HE2019

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 of Certified HAZOP Member. It covers the importance of process safety, common types of industrial hazards, difference between risk and hazard and process safety management (PSM) standards; the process hazard analysis (PHA) techniques, principles and terminology of HAZOP and HAZOP guide words and parameters; the HAZOP leader and scribe responsibilities and role of discipline engineers; and the importance of diverse expertise and rules for effective participation.

Further, the course will also discuss the PHA software tools, features and functionalities; the benefits of digital versus manual recording and industry practices in digital documentation; the PFDs, P&IDs and process node identification and segmentation; the HAZOP deviation analysis techniques and standard worksheet structure; the record deviations, causes, consequences and safeguards and recommendations; and the consistency and clarity in documentation.

During this interactive course, participants will learn the pre-work and planning activities, kickoff checklist and advanced P&ID review techniques; the critical deviations, multiple causes, classifying consequence severity and evaluating safeguard adequacy; the risk assessment, risk ranking matrix, functional safety and instrumented protective systems; the recommendations management and action tracking, process mode considerations, batch operation hazards and special hazards in startup/shutdown; the HAZOP variations and adaptations, subdividing process into modes and operating phases and HAZOP for utilities and ancillary systems; the leadership and facilitation of HAZOP studies, regulatory requirements, HAZOP standards and linking HAZOP to LOPA and other risk tools; and the HAZOP in digital/smart plants, auditing and validation of HAZOP studies and human factors in HAZOP.

Course Objectives

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

- Get certified as an "*Certified HAZOP Member*"
- Discuss the hazards identification and analysis techniques including the techniques of hazard identification and analysis – HAZOP
- Identify the process exercises for hazard identification and the application of HAZOP techniques including deviations, causes, consequences and safeguards recommendations
- Explain PFD and P&IDs review during HAZOP, HAZOP variations, guidelines for subdividing the process into modes
- Recognize process node characteristics, functional safety, risk ranking using the approved matrix and HAZOP safety standards
- Discuss the importance of process safety including the common types of industrial hazards, difference between risk and hazard and process safety management (PSM) standards
- Carryout process hazard analysis (PHA) techniques and explain the principles and terminology of HAZOP and HAZOP guide words and parameters
- Discuss HAZOP leader and scribe responsibilities, role of discipline engineers, importance of diverse expertise and rules for effective participation
- Identify PHA software tools, features and functionalities, benefits of digital versus manual recording and industry practices in digital documentation
- Read and interpret PFDs and P&IDs and apply process node identification and segmentation and HAZOP deviation analysis techniques
- Describe standard worksheet structure, record deviations, causes, consequences and apply safeguards and recommendations and consistency and clarity in documentation
- Initiate pre-work and planning activities, kickoff checklist, facilitating the discussion and advanced P&ID review techniques

- Discuss critical deviations, analyze multiple causes, classify consequence severity and evaluate safeguard adequacy
- Illustrate risk assessment and risk ranking matrix, recognize functional safety and instrumented protective systems and apply recommendations management and action tracking
- Discuss process mode considerations, batch operation hazards and special hazards in startup/shutdown
- Determine HAZOP variations and adaptations, subdividing process into modes and operating phases and HAZOP for utilities and ancillary systems
- Discuss leadership and facilitation of HAZOP studies, regulatory requirements, HAZOP standards and linking HAZOP to LOPA and other risk tools
- Recognize HAZOP in digital/smart plants, audit and validation of HAZOP studies and human factors in HAZOP

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 hazard identification and operability (HAZOP) for safety engineers, area managers, safety/environment personnel, plant operators, HSE staff and other technical staff.

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$ 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 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 HAZOP Member*". 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: 14-Nov-24
HTME No. 74851
Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE2019-IH	Certified HAZOP Member	Nov 10-14, 2024	25	2.5

Total No. of CEU's Earned as of TOR Issuance Date 2.5

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

Haward's 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**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). 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.

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. Ahmed Mady is a **Senior HSE Consultant** with over **30 years** of field experience in teaching/training and hands-on experience within the **Oil & Gas** industries. He is well-versed in the areas of **Environmental Management System** (**EMS**), **Sustainability Management**, Global **Sustainability** Assessment System, **Sustainability** & Environmental Awareness Fundamentals, **Management System Auditing**, Occupational Health, Safety & Environment (**HSE**), **Environmental & Waste Management**, Environmental Management & Technology (**EMT**), **Environmental Pollution & Control**, Environmental Impact Assessment (**EIA**), **Waste Management & Environmental Protection**, **HAZMAT**, **HAZCOM**, **HAZOP**, **Accident & Incident Investigation**, **Emergency Response**, **Hazard** Recognition, **Hazard** Assessment, **Risk Control**, **Risk Monitoring Techniques**, Radioactive Chemicals, **Emergency Procedures**,**PSM**, First Aid & PPE, MSDS, **Chemical Hazards**, **Chemical Monitoring & Protection**, **Chemical Spill Clean Up**, **Strategic Planning**, **Security Management**, **Crisis Management**, **Environmantal** Awareness, Search & Rescue Operations, **HSE Management**, **Risk Analysis** Evaluation & Management, **Security Operations** Management, **Investigation & Security Surveying**, **Security Crisis** Management, **Corporate Security Planning**, **Strategic Analysis**, Strategy Selection & Implementation, Security Policies & Procedures, Logistics Management, Systems Analysis & Design and Organization Procedure Evaluation & Auditing.

During his service, he had been tasked as the **Chief Information Directorate** of the **Ministry of Civil Aviation** and the **Chief Engineering Analyst**, **On-Scene Commander** (**OSC**) **& Incident Commander** (**IC**) in the **Air Force** and was responsible for a team of engineers supporting all engineering studies, modifications, aging studies and maintenance analysis. Being a **Board Member** of the **Aviation Information Technology Center**, he holds control of the overall strategies and procedures for the ministry, contracting for major IT projects, supervising all IS activities in the aviation sector and ensuring quality and success of delivery. He had likewise served as the **Commander** of the **Air Force** and had worked closely with the **Logistics Computer Center** wherein he gave out direction on **Operational & Tactical Logistics Planning** and **Strategic Military Logistics** to numerous high ranking officials, and at the same time **commanding flying Air Force maintenance squadron logistics field activities**. Mr. Ahmed retired in the service as a **Major General**.

Earlier in his career, Mr. Ahmed had occupied several challenging roles with several large Logistics companies as their **General Manager**, **Maintenance Engineer**, **Systems Analyst**, **Training Branch Chief**, **Systems & Communication Engineer**, **Computer Programmer** and **Logistic Instructor**. Moreover, he has worked as the **Project Manager** contracted by **KNPC** for the year 2014-2016 in delivering **Certified Programs** for **Kuwaiti Contractor Employee** (Electrical, Mechanical & Pipefitting, Welding & Fabrication, Process Operator, Instrumentation & Control). Further, he has travelled all over Europe, Asia and the Americas joining numerous conferences and workshops with the **Ministry of Foreign Affairs** and international companies such as **IBM**, **System Science Corporation** (**SSC**) and **International Air Transport Association** (**IATA**).

Mr. Ahmed has a **Bachelor** degree in **Mechanical Engineering**. Further, he has gained **Diplomas** on **Civil Aviation Engineering**, **Islamic Studies** and **Information Systems & Technology**. Moreover, he is a **Certified Internal Verifier** by **City & Guilds Level 4 Certificate** in **Leading the Internal Quality Assurance of Assessment Processes & Practice** and **Certified Assessor** in **Level 3 Certificate in Assessing Vocational Achievement** under the **TAQA Qualification** (**Training**, **Assessment & Quality Assurance**), a **Certified Internal Verifier Level 2 & 3 NVQ Processing Operations: Hydrocarbons** by **the British City & Guilds**, a **Certified Internal Verifier/Trainer/Assessor by the British Institute of Leadership & Management** (**ILM**) and a **Certified Instructor/Trainer**. Further, he has delivered various trainings, workshops and conferences worldwide.

Course Program

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

Day 1:	***Sunday, 21st of December 2025***
0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 - 0830	***PRE-TEST***
0830 – 0900	***Introduction to Process Safety & Hazard Identification*** *Definition & Importance of Process Safety • Common Types of Industrial Hazards • Difference Between Risk & Hazard • Overview of Process Safety Management (PSM) Standards*
0900 – 0930	***Overview of Process Hazard Analysis (PHA) Techniques*** *Introduction to Qualitative versus Quantitative Methods • Comparison of PHA Tools (What-If, FMEA, HAZID, HAZOP) • Selection Criteria for PHA Methods • PHA Implementation Timeline in Project Lifecycle*
0930 - 0945	*Break*
0945 – 1035	***Principles & Terminology of HAZOP*** *History & Evolution of HAZOP • Key HAZOP Terms: Deviations, Causes, Consequences • Nodes, Guide Words, Parameters • Role of HAZOP Team*
1035 – 1230	***Understanding HAZOP Guide Words & Parameters*** *Common Guide Words: No, More, Less, As Well As, etc. • Parameters: Flow, Pressure, Temperature, Level • Application Techniques • Examples & Exercises*
1230 - 1245	*Break*
1245 – 1300	***Team Composition & Roles in HAZOP*** *HAZOP Leader & Scribe Responsibilities • Role of Discipline Engineers • Importance of Diverse Expertise • Rules for Effective Participation*
1300 - 1420	***Tools & Software Used in HAZOP Studies*** *Introduction to PHA Software Tools (PHAWorks, HAZOP Manager, etc.) • Features & Functionalities • Benefits of Digital versus Manual Recording • Industry Practices in Digital Documentation*
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 One*

Day 2:	***Monday, 22nd of December 2025***
0730 – 0830	***Reading & Interpreting PFDs & P&IDs*** *Symbols & Legends in P&IDs • Identifying Process Flow Sequences • Understanding Control Loops & Interlocks • Instrumentation & Alarms in Diagrams*
0830 – 0930	***Process Node Identification & Segmentation*** *Defining Nodes in Continuous & Batch Processes • Guidelines for Node Selection • Node Segmentation Exercises • Avoiding Over/Under Segmentation*
0930 - 0945	*Break*

0945 – 1035	***HAZOP Deviation Analysis Techniques*** *Deviation Generation Matrix • Systematic Deviation Recording • Root Cause Identification • Consequence Development Strategies*
1035 - 1230	***HAZOP Worksheet Development*** *Standard Worksheet Structure • Recording Deviations, Causes, Consequences • Safeguards & Recommendations • Consistency & Clarity in Documentation*
1230 - 1245	*Break*
1245 – 1300	***Initiating a HAZOP Session (Simulated)*** *Pre-Work & Planning Activities • Kickoff Checklist • Facilitating Discussion • Mock HAZOP Example (Case Study Intro)*
1300 - 1345	***Advanced P&ID Review Techniques*** *Identifying Safety-Critical Elements • Interlock Verification • Reviewing Utility Systems • Managing Revisions in HAZOP Sessions*
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, 23rd of December 2025***

0730 – 0830	***Real-Life HAZOP Session Simulation*** *Select a Case Study (e.g., Distillation Unit, Compressor Train) • Assign HAZOP Roles • Group Walkthrough of a Node • Capture Findings in Real-Time*
0830 – 0930	***Deviations, Causes, Consequences & Safeguards*** *Deep Dive into Critical Deviations • Analyzing Multiple Causes • Classifying Consequence Severity • Evaluating Safeguard Adequacy*
0930 - 0945	*Break*
0945 – 1035	***Risk Assessment & Risk Ranking Matrix*** *Risk Matrix Development • Frequency & Severity Scales • Risk Acceptance Criteria • Prioritizing Recommendations*
1035 - 1230	***Functional Safety & Instrumented Protective Systems*** *Overview of IEC 61511 / 61508 • Safety Instrumented Systems (SIS) • SIL Assessment Overview • Integration of SIS into HAZOP*
1230 - 1245	*Break*
1245 – 1300	***Recommendations Management & Action Tracking*** *Categorizing Actions (Critical, Major, Minor) • Assigning Responsibilities • Follow-Up & Verification • Communication with Stakeholders*
1300 - 1345	***HAZOP for Batch & Continuous Processes*** *Process Mode Considerations • Batch Operation Hazards • Special Hazards in Startup/Shutdown • Case Examples for Both Process Types*
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*

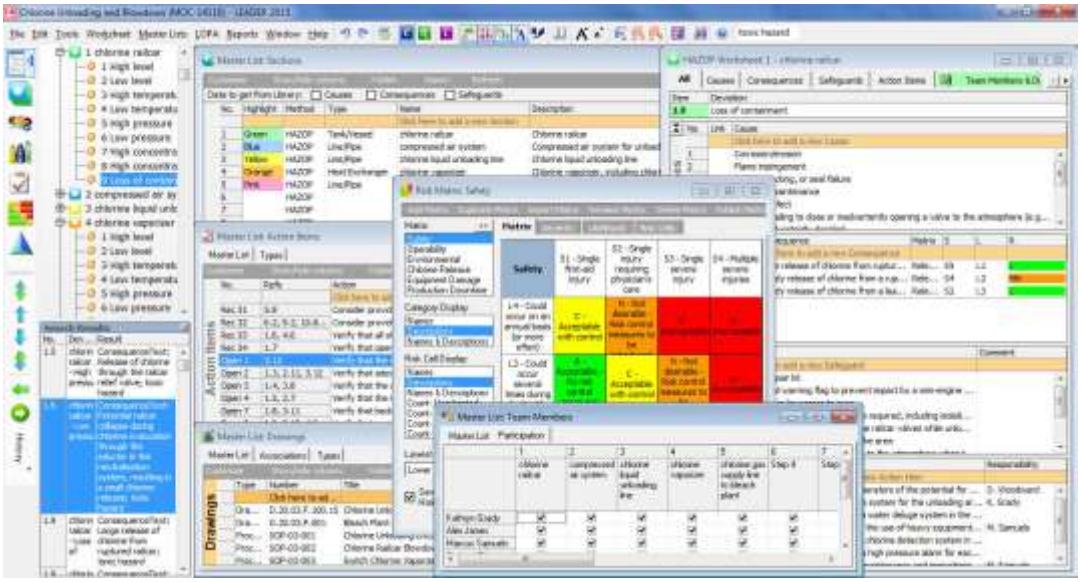
Day 4:	Wednesday, 24th of December 2025
0730 – 0830	***HAZOP Variations & Adaptations*** *Procedural HAZOP • Control HAZOP • Human Factors HAZOP • Limitations & Adaptations*
0830 – 0930	***Subdividing Process into Modes & Operating Phases*** *Normal, Startup, Shutdown, Emergency • Phase-Based HAZOP Technique • Developing Phase-Specific Guide Words • Documentation of Phase-Specific Hazards*
0930 - 0945	*Break*
0945 – 1035	***HAZOP for Utilities & Ancillary Systems*** *Steam, Air, Nitrogen, Water Systems • Indirect Hazards • Integration with Main Process HAZOP • Case-Based Discussion*
1035 - 1230	***Leadership & Facilitation of HAZOP Studies*** *Characteristics of an Effective Facilitator • Group Dynamics & Conflict Management • Steering Discussions & Decision Making • Summary & Wrap-Up Techniques*
1230 - 1245	*Break*
1245 – 1300	***Regulatory Requirements & HAZOP Standards*** *OSHA PSM & EPA RMP • API RP 750 / 752 / 753 • IEC & ISO Guidance • KSpecific or National Standards*
1300 - 1345	***Linking HAZOP to LOPA & Other Risk Tools*** *When HAZOP Results Trigger LOPA • Introduction to Initiating Events & IPLs • Bridging Gap Between HAZOP & QRA • Integrated Risk Management Approach*
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, 25th of December 2025
0730 - 0830	***Complex Case Studies & Lessons Learned*** *HAZOP Failures & Incident Case Histories • Root Causes & Analysis Breakdown • Group Discussion & Reflection • Best Practices to Avoid Pitfalls*
0830 – 0930	***HAZOP in Digital/Smart Plants*** *Digital Twin Integration • Real-Time Hazard Monitoring • Using SCADA/DCS Data for Risk Detection • HAZOP 4.0 Trends*
0930 – 0945	*Break*
0945 -1100	***Audit & Validation of HAZOP Studies*** *How to Audit a HAZOP • Verification versus Validation • Quality Assurance in HAZOP • Reporting & Retention Practices*
1100 – 1200	***Human Factors in HAZOP*** *Ergonomics & Control Room Design • Cognitive Failure Analysis • Human Error Impact Assessment • Interface & Alarm Rationalization*
1200 - 1215	*Break*

1215 - 1345	***Practical Group Workshop & Final Simulation*** *Live Simulation with Rotating Leadership • Mixed Process Nodes (Multiple Units) • Real-Time Risk Matrix Integration • Recommendations & Final Reporting*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
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 our state-of-the-art Haward PHA/HAZOP Software.



Haward PHA/HAZOP Simulator

Course Coordinator

Reem Dergham, Tel: +974 4423 1327, Email: reem@haward.org