COURSE OVERVIEW HE1820
Professional Process Safety Inspector (PPSI)
Module 1: Fundamentals of Process Safety

Course Title
Professional Process Safety Inspector (PPSI): Module 1: Fundamentals of Process Safety

Course Date/Venue
November 11-15, 2024/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
HE1820

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 certification program is designed to train delegates on Process Safety Inspection and certify them as Professional Process Safety Inspectors. The program comprises of 4 modules that shall be taken in order:-

Module 1: Fundamentals of Process Safety
Module 2: Process Safety Management (PSM) & Regulatory Framework
Module 3: Human Factors & Cultural Aspects
Module 4: Process Safety Auditing & Site Inspection

Module 1 of this program is designed to provide participants with a detailed and up-to-date overview of Fundamentals of Process Safety. It covers the process safety and the major industrial accidents and their impacts; the importance of process safety in the industrial setting; the basic terminologies and definitions; and the process safety management (PSM), hazard identification, HAZOP and What-if analysis.

During this interactive course, participants will learn the risk assessment and risk matrix and its application; the principles of layers of protection analysis (LOPA), independent protection layers (IPL), safety instrumented systems (SIS) and safety integrity level (SIL) and its determination; the functional safety lifecycle; the importance of facility siting, blast radius and impact zones; the passive and active protections in design, land use planning around industrial sites and fire zone planning; the fundamentals of mechanical integrity; the asset integrity and reliability and non-destructive testing techniques; and the corrosion monitoring and protection, inspection frequency and scheduling.

Course Objectives

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

- Complete Module 1 of the *"Professional Process Safety Inspector"* program is your successful road for this prestigious professional certification
- Define process safety and discuss the major industrial accidents and their impacts
- Explain the importance of process safety in the industrial setting and the basic terminologies and definitions
- Carryout process safety management (PSM), hazard identification, HAZOP and What-if analysis
- Employ risk assessment and risk matrix and its application
- Recognize the principles of layers of protection analysis (LOPA), independent protection layers (IPL), safety instrumented systems (SIS) and safety integrity level (SIL) and its determination
- Discuss functional safety lifecycle, the importance of facility siting, blast radius and impact zones
- Apply passive and active protections in design, land use planning around industrial sites and fire zone planning
- Discuss the fundamentals of mechanical integrity and apply asset integrity and reliability and non-destructive testing techniques
- Employ corrosion monitoring and protection, inspection frequency and scheduling

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 fundamentals of process safety for site inspectors, safety engineers, supervisors, newly appointed managers, junior managers, safety representatives and newly qualified health and safety advisors within the process industries.

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:-

Haward Technology Middle East

Certifies that

Waleed Al Habeeb

Has successfully completed a course on

Professional Process Safety Inspector: Module 1: Fundamentals of Process Safety

and is hereby awarded 3.0 CEUs (Continuing Education Units) equivalent to 30 PDHs (Professional Development Hours)

Oct 02-06, 2022	74851/01/HE1820/DXB/06.10.22
Course Date	Certificate Number
Oct 06, 2022	Oct 06, 2027
Certificate Issuance Date	Certificate Expiry Date

Mr. John Burnip
Course Instructor

ACTVET License No.
0588/2013

Mr. Jaryl Castillo
Academic Director

Certificate Accreditation
Please see overleaf

(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)

CEU Official Transcript of Records

TOR Issuance Date: 14-Nov-22

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE1820	Professional Process Safety Inspector: Module 1: Fundamentals of Process Safety	October 02-06, 2022	30	3.0

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

TRUE COPY

Jaryl Castillo
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 | E-mail: info@haward.org | Website: www.haward.org

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.

Accommodation

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

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. John Burnip, MSc, BSc, is a **Senior HSE Consultant** with over **35 years** of practical experience within **Oil**, **Gas** and **Petrochemical** industries. His wide experience covers **PHA**, **HAZOP**, **HAZID**, Offshore Operations, Offshore Construction, Crane Inspection, Crane Operations, **Confined Space Entry**, **Fall Protection**, **Work Permit & First Aid**, **Emergency Reponse**, Start-up, Commissioning, Fabrication, Pipelaying, Hook-Up and Marine Operations. John has greatly contributed in upholding the highest possible levels of safety for numerous International Oil & Gas projects, Generation Systems & Platform Revamp, LPG & Gas Compression, Marine, Offshore and Power Plant Construction. Presently, he is the **HSE Advisor** for DOT & STATOIL doing Training Audits & Inspection on their implementation of **ISM system**, **ISO 9001**, **ISO 14001**, **OHSAS 18001**, **IMO** Regulations, **HAZID/HAZOP** for **Hazard & Risk** Management.

With his extensive experience, John has gained expertise in the execution of Marine Safety, Risk Assessment & Evaluation, Hazardous Operation Identification & Leadership, Emergency Response, Incident Investigation, Inspection Techniques, Behavioural Based Safety & Job Safety Analysis; the development and establishment of Emergency Response Procedures and Certification of Mechanical, Electrical, **Heavy Lifting** operations within the oil & gas industries.

During Mr. Burnip's long career life, he had successfully carried out numerous projects in **Europe**, **North America**, **South America**, **Southeast Asia**, **Middle East** and the **North Sea**. He had worked for DOT, ZADCO, McDermott International (USA, Qatar, Egypt, India, Oman, Dubai and Abu Dhabi), PDO, Harland & Wolff PLC Belfast in North Ireland, Howard Doris – Kishorn in Scotland, Westinghouse Electric in Brazil and South Korea and Chevron Oil in Scotland. He also spent over 5 years as an **HSE Instructor** on Mahanakorn University of Technology.

Mr. Burnip has a **Master** and **Bachelor** degrees in **Mechanical Engineering** (**UK**). He is a **Certified Safety Auditor** (SAC), **Environmental Health and Safety Management Specialist** on Fall Protection, Elevated Structures, Material Handling, Trenching & Excavations, and Welding Brazing Safety Technician, and further holds a **NEBOSH** Construction Certificate (UK) and a **Cambridge Teaching Certificate**. He is a well-regarded member of the **National Association of Safety Professionals** and the **Association of Cost Engineers** (**UK**).

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.

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 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, 11th of November 2024

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0815 – 0930	***What is Process Safety?***
0930 – 0945	*Break*
0945 – 1030	***Historical Perspective: Major Industrial Accidents & Their Impacts***
1030 – 1130	***Importance of Process Safety in the Industrial Setting***
1130 – 1230	***Basic Terminologies & Definitions***
1230 – 1245	*Break*
1245 – 1315	***Overview of Process Safety Management (PSM)***
1315 – 1420	***Case Study: Bhopal Gas Tragedy***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2: Tuesday, 12th of November 2024

0730 – 0930	***Basics of Hazard Identification***
0930 – 0945	*Break*
0945 – 1030	***Tools for Hazard Identification: HAZOP, What-If Analysis***
1030 – 1130	***Introduction to Risk Assessment***
1130 – 1230	***Qualitative versus Quantitative Risk Assessment***
1230 – 1245	*Break*
1245 – 1315	***Risk Matrix & Its Application***
1315 – 1420	***Case Study: Piper Alpha Disaster***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

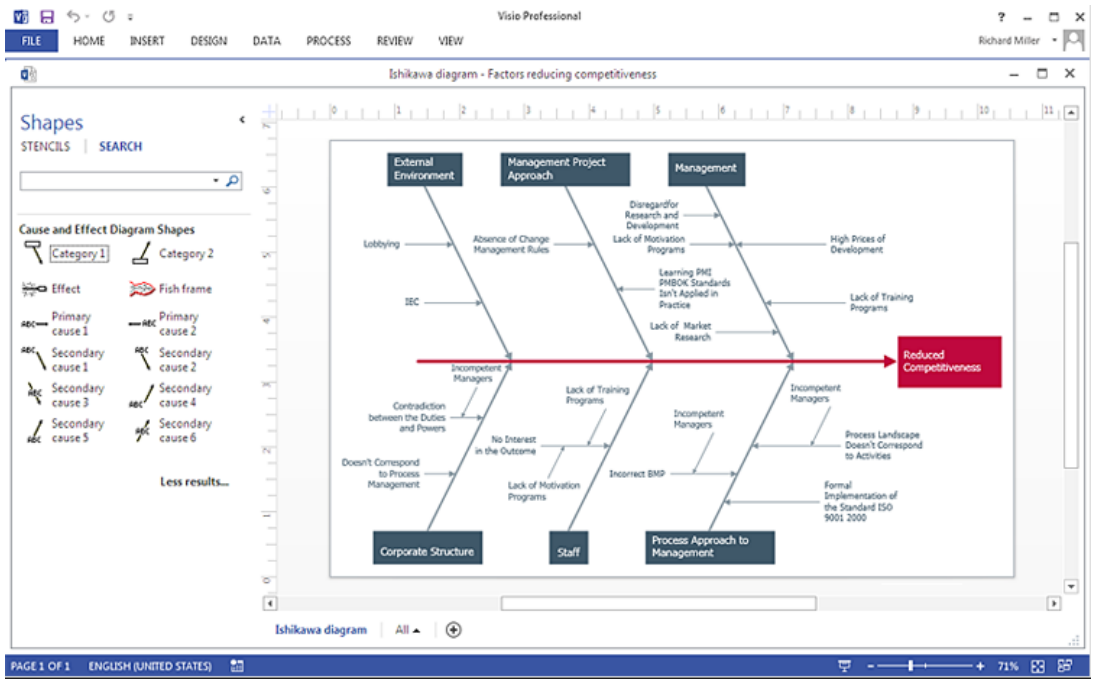
Day 3:	Wednesday, 13th of November 2024
0730 – 0930	**Principles of Layers of Protection Analysis (LOPA)**
0930 – 0945	Break
0945 – 1030	**Independent Protection Layers (IPL)**
1030 – 1130	**Introduction to Safety Instrumented Systems (SIS)**
1130 – 1230	**Safety Integrity Level (SIL) & Its Determination**
1230 – 1245	Break
1245 – 1315	**Functional Safety Lifecycle**
1315 – 1420	**Workshop: LOPA Exercise on a Given Process**
1420 – 1430	**Recap**
1430	Lunch & End of Day Three

Day 4:	Thursday, 14th of November 2024
0730 – 0930	**Importance of Facility Siting**
0930 – 0945	Break
0945 – 1030	**Understanding Blast Radius & Impact Zones**
1030 – 1130	**Passive & Active Protections in Design**
1130 – 1230	**Land Use Planning Around Industrial Sites**
1230 – 1245	Break
1245 – 1315	**Fire Zone Planning**
1315 – 1420	**Case Study: Texas City Refinery Explosion**
1420 – 1430	**Recap**
1430	Lunch & End of Day Four

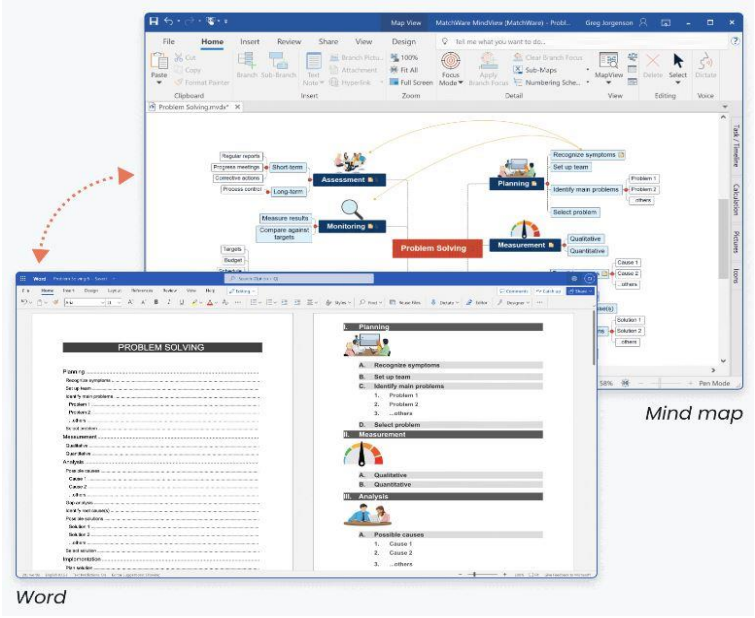
Day 5:	Friday, 15th of November 2024
0730 – 0830	**Fundamentals of Mechanical Integrity**
0830 – 0930	**Asset Integrity & Reliability**
0930 – 0945	Break
0945 – 1030	**Non-Destructive Testing Techniques**
1030 – 1115	**Corrosion Monitoring & Protection**
1115 – 1200	**Inspection Frequency & Scheduling**
1200 – 1215	Break
1215 – 1300	**Workshop: Developing an Inspection Checklist**
1300 – 1315	**Course Conclusion**
1315 – 1415	**COMPETENCY EXAM – Module 1**
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Simulators (Hands-on Practical Sessions)

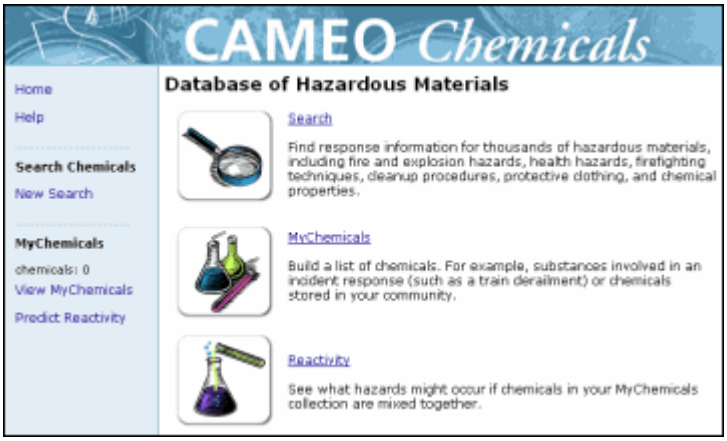
Practical session will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the simulator "Visio Software", "Mindview Software"; "CAMEO Chemicals Suite Simulator", "Chemical Compatibility 1.1 Simulator" and "Chemical Safety Database Simulator".



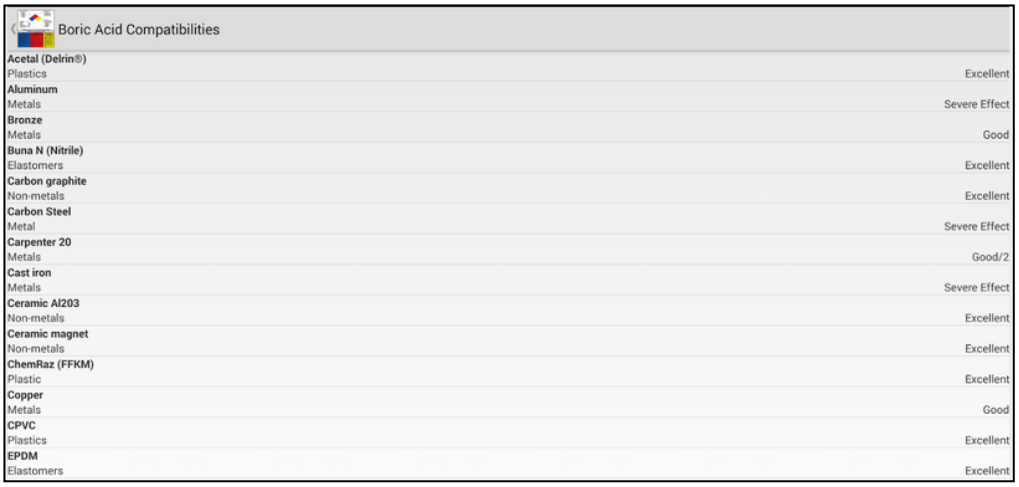
Visio Software



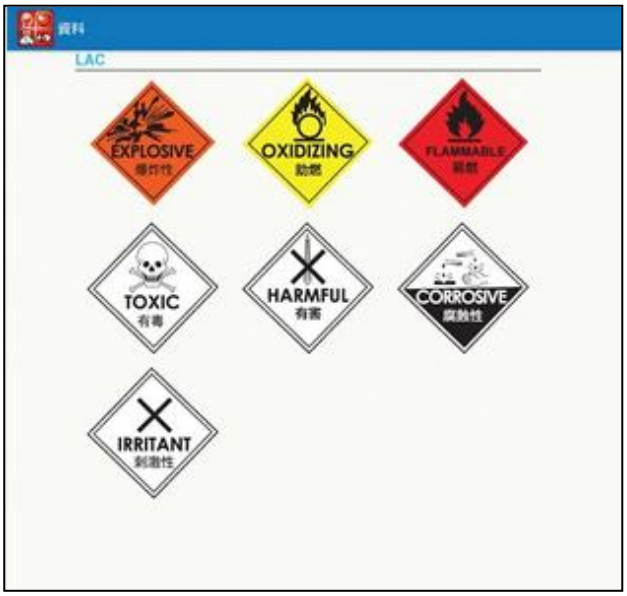
Mindview Software



CAMEO Chemicals Suite Simulator



Chemical Compatibility 1.1 Simulator



Chemical Safety Database Simulator

Course Coordinator

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