

COURSE OVERVIEW HE0091(GA2)

Certified Process Safety Management (PSM) - Advanced

Course Title

Certified Process Safety Management (PSM) - Advanced

Course Reference

HE0091(GA2)

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Date/Venue

Session(s)	Date	Venue
1	April 29-May 03, 2024	Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
2	July 14-18, 2024	Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA
3	October 20-24, 2024	Oryx Meeting Room, Doubletree By Hilton Doha-Al Sadd, Doha, Qatar
4	December 15-19, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE



Course Description



This practical highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.



Unexpected releases of toxic, reactive, or flammable liquids and gases in processes involving highly hazardous chemicals have been reported for many years in various industries that use chemicals with such properties. Regardless of the industry that uses these highly hazardous chemicals, there is a potential for an accidental release any time they are not properly controlled, creating the possibility of disaster.



To help ensure safe and healthful workplaces, OSHA has issued the Process Safety Management of Highly Hazardous Chemical standards (29 CFR 1910.119), which contains requirements for the management of hazards associated with processes using highly hazardous chemicals.

Process safety management (PSM) is addressed in specific standards for the general and construction industries. OSHA's standard emphasizes the management of hazards associated with highly hazardous chemicals and establishes a comprehensive management program that integrates technologies, procedures and management practices.

This is an advanced course for Process Safety Management as applicable to process industry. The course provides an in-depth study of each PSM element of HSEMS PSM program and how the overall architecture applies to each. The course introduces each PSM element and the specific guidelines for integrating PSM element requirements into their corporate program (such as quality and reliability programs) and evaluating program compliance throughout the implementation phase. This course also covers how to expand PSM program to include RBPS (Risk Based Process Safety) elements as proposed by the CCPS (Center for Chemical Process Safety), Aiche, PSM program.

Course Objectives

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

- Apply and gain an advanced knowledge on OSHA Process Safety Management (PSM) Standard 29 CFR 1910.119
- Interpret the performance-based requirements of the US OSHA PSM and EPA risk management standards mentioned above, as well as learn about related industry standards
- Discuss the elements of process safety that are missing from typical PSM systems, including Human Factors elements (communication, human system interface, work environment, staffing and fitness for duty), Facility Siting element, Project Risk Management, Senior Leadership & Accountability.
- Review the Risk-Based Process Safety (RSPS) guide (2007) from CCPS/AIChE in order to understand how to close critical gaps
- Implement multiple options and an effective need-specific program
- Employ specific guidelines for developing cost effective written programs tailored for each PSM elements, whether for a single facility or a corporation
- Avoid costly implementation mistakes
- Identify the jargon for communicating PSM requirements to others throughout the organization
- Apply for each element as per the following:
 - How to develop written programs to meet PSM requirements
 - How to incorporate and integrate the PSM element requirements into other corporate programs (other corporate management systems)
 - Key performance indicators
 - How to evaluate program compliance throughout implementation
 - How to begin implementation at the company
 - Additional training necessary for implementation of specific elements
- Illustrate interpretations of PSM requirements and demonstrate developing an effective PSM program that can be adapted for their facility using actual and generic case studies

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 process safety management for corporate executives, directors, process and operation managers, shift controllers and assistant shift controllers, maintenance and engineering managers, all section heads, HSE managers, supervisors, safety engineers and officers.

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

Abu Dhabi	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.
Al Khobar	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.
Doha	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.
Dubai	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.

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.

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

CEU Official Transcript of Records

TOR Issuance Date: 14-Sep-17
HTME No. PAR213244
Participant Name: Waleed Al Baloushi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE091(GA2)	Certified Process Safety Management (PSM) - Advanced	September 10-14, 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 is an Authorized Training Provider by the International Association for Continuing Education and Training (IACET), 11130 Sunrise Valley Drive, Suite 350 Reston, VA 20191, 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












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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.

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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. Mike Poulos, MSc, BSc, is a **Senior Process & Safety Engineer** with over **35 years** of industrial experience within the **Utilities, Refinery, Petrochemical and Oil & Gas** industries. His expertise lies extensively in the areas of **Process Safety Management (PSM), Incident & Accident Investigation & Reporting, Safety in Process Design, Risk Assessment, Process Design & Troubleshooting, Engineering Problem Solving, Safety Engineering & Risk Management, General Safety, Process Equipment Design & Troubleshooting, Petroleum Processing, Process Design Specifications, Process Calculation Methods, Equipment Sizing & Selection, Piping, Pumps, Compressors, Heat Exchangers, Air Coolers, Direct-Fired Heaters, Process Vessels, Fractionator Columns, Reactors, Ancillary Equipment, Mechanical & Safety Aspects, Cost Estimation, Commissioning & Start-Up, Production & Cost Reduction, Reactor Building Ventilation System, PVC Initiators Storage Bunkers, PVC Modernization & Expansion, PVC Reactor, PVC Plant Reactors Pre-Heating, PVC Plant Start-Up & Commissioning, PVC Plant Shutdown, PVC Driers Automation, VCM Recovery, VCM Sphere Flooding System, VCM Storage Tanks, Steam Tripping Facilities, Solvents Plant Automation Commissioning & Start-Up and Inferential Properties System.** Further, he is also well-versed in Advanced Process Control Technology, Designing Process Plant Fail-Safe Systems, Quantitative Risk Assessment, On-Line Statistical Process Control, Principles and Techniques of Contemporary Management, Rosemount RS3, Polymer Additives, Polymer Reaction Engineering, Polymer Rheology and Processing, GRID Management and Batch Process Engineering.

During his career life, Mr. Poulos held significant positions as the **Chemical Plants Technology Engineer, PVC Plant Production Engineer, PVC Plant Shutdown Coordinator, PVC Plant/CC Solvents Plants Acting Section Head and Chemical Distribution Section Head** from Hellenic Petroleum, wherein he is responsible for the development of integrated system.

Mr. Poulos has a **Master and Bachelor degrees in Chemical Engineering** from the **University of Massachusetts and Thessaloniki Polytechnic** respectively. Further, he is a **Certified Instructor/Trainer** and a **member of Greek Society of Chemical Engineers and Greek Society of Engineers.**

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 - 08150	Welcome & Introduction
08150 – 0830	PRE-TEST
0830 – 0930	Introduction OSHA PSM Standard 29 CFR 1910.119
0930 – 0945	Break
0945 – 1200	Performance-Based Requirements of the US OSHA PSM & EPA Risk Management Standards
1200 – 1215	Performance-Based Requirements of the US OSHA PSM & EPA Risk Management Standards (cont'd)
1215 – 1330	Break
1330 – 1420	Related Industry Standards
1420 – 1430	Recap
1430	Lunch & End of Day One

Day 2

0730 – 0930	The Elements of Process Safety that are Missing from Typical PSM System Human Factor Element (Communication, Human System Interface, Work Environment, Staffing and Fitness for Duty)
0930 – 0945	Break
0945 – 1030	The Elements of Process Safety that are Missing from Typical PSM System (cont'd) Facility Siting Element • Project Risk Management • Senior Leadership & Accountability
1030 - 1230	The Risk-Based Process Safety (RBPS) Guide (2007) from CCPS/ AIChE to Understand How to Close Critical Gaps
1230 - 1245	Break
1245 – 1420	Multiple Options for Implementing an Effective Need-Specific Program
1420 – 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0930	How to Avoid Costly Implementation Mistakes
0930 – 0945	Break
0945 – 1100	Jargon for Communicating PSM Requirements to Others Throughout the Organization Develop Written Programs to Meet PSM Requirements
1100 – 1230	Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd) Develop Written Programs to Meet PSM Requirements (cont'd)
1230 – 1245	Break



1245 – 1420	Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd) Incorporate and Integrate the PSM Element Requirements into other Corporate Programs and other Corporate Management Systems
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0930	Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd) Key Performance Indicators
0930 – 0945	Break
0945 – 1100	Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd) How to Evaluate Program Compliance Throughout the Implementation
1100 – 1200	Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd) How to Begin Implementation at the Company
1200 – 1215	Break
1215 – 1420	Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd) Additional Training Necessary for Implementation of Specific Elements
1420 – 1430	Recap
1430	Lunch & End of Day Four

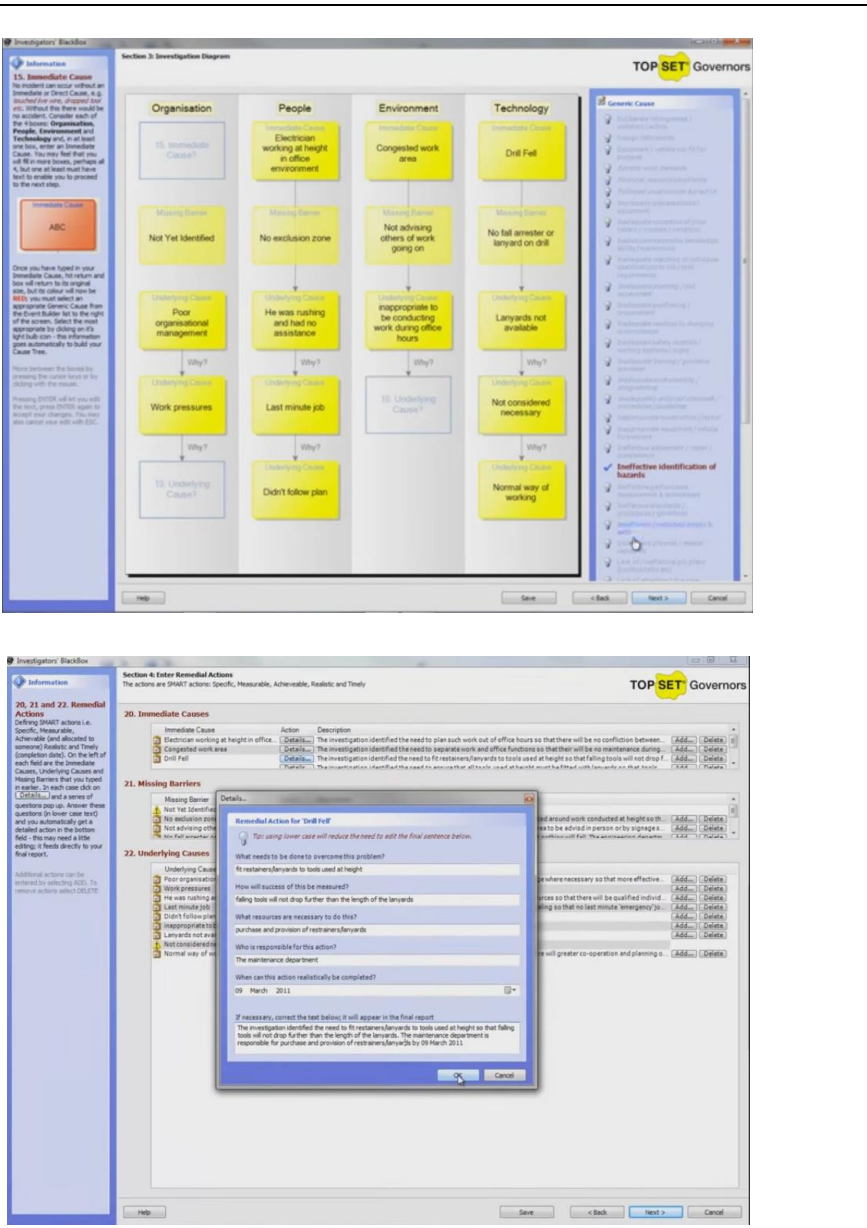
Day 5

0730 – 0900	Case Study #1 To Illustrate Interpretation of PSM Requirements
0900 – 0915	Break
0915 – 1045	Case Study # 1 (cont'd) To Illustrate Interpretations of PSM Requirements (cont'd)
1045 – 1200	Case Study # 2 To Demonstrate Developing an Effective PSM Program that Can be Adapted to the Facility
1200 – 1215	Break
1215 – 1300	Discussion & Review
1300 - 1315	Course Conclusion
1315 – 1415	COMPETENCY EXAM
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course



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 “BlackBox Simulator”; “Chemical Compatibility 1.1 Simulator”, “Chemical Safety Database Simulator”, and “CAMEO Chemicals Suite Simulator”.



The image displays two screenshots of the BlackBox Software Tool interface. The top screenshot shows the 'Investigator's Backlog' for 'Section 3: Investigation Diagram'. It features a grid of boxes representing causes categorized by Organisation, People, Environment, and Technology. A 'Generic Causes' list is visible on the right. The bottom screenshot shows 'Section 4: Enter Remedial Actions', where users can define SMART actions for identified causes. A 'Remedial Action for Drill Fall' dialog box is open, detailing the action, its justification, and completion date.

BlackBox Software Tool



Boric Acid Compatibilities	
Acetal (Delrin®)	
Plastics	Excellent
Aluminum	
Metals	Severe Effect
Bronze	
Metals	Good
Buna N (Nitrile)	
Elastomers	Excellent
Carbon graphite	
Non-metals	Excellent
Carbon Steel	
Metal	Severe Effect
Carpenter 20	
Metals	Good/2
Cast iron	
Metals	Severe Effect
Ceramic Al2O3	
Non-metals	Excellent
Ceramic magnet	
Non-metals	Excellent
ChemRaz (FFKM)	
Plastic	Excellent
Copper	
Metals	Good
CPVC	
Plastics	Excellent
EPDM	
Elastomers	Excellent

Chemical Compatibility 1.1 Simulator



Chemical Safety Database Simulator



CAMEO Chemicals
Database of Hazardous Materials

Home
Help
Search Chemicals
New Search
MyChemicals
chemicals: 0
View MyChemicals
Predict Reactivity

Search
Find response information for thousands of hazardous materials, including fire and explosion hazards, health hazards, firefighting techniques, cleanup procedures, protective clothing, and chemical properties.

MyChemicals
Build a list of chemicals. For example, substances involved in an incident response (such as a train derailment) or chemicals stored in your community.

Reactivity
See what hazards might occur if chemicals in your MyChemicals collection are mixed together.

CAMEO Chemicals Suite Simulator

Course Coordinator

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