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	January 21-25, 2024	The Mouna Meeting Room, The H Hotel, Sheikh Zayed Road, Dubai, UAE
2	February 18-22, 2024	Sama Meeting Room, Pullman Doha Westbay, Doha Qatar
3	March 03-07, 2024	TBA, Radisson Blu Hotel Istanbul, Sisli, Istanbul, Turkey

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

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.
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.
Istanbul	**US$ 6,000** per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

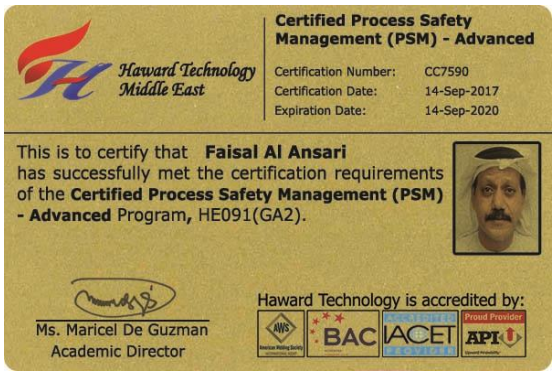
Course Certificate(s)

(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

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

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. 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, **VC**M 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

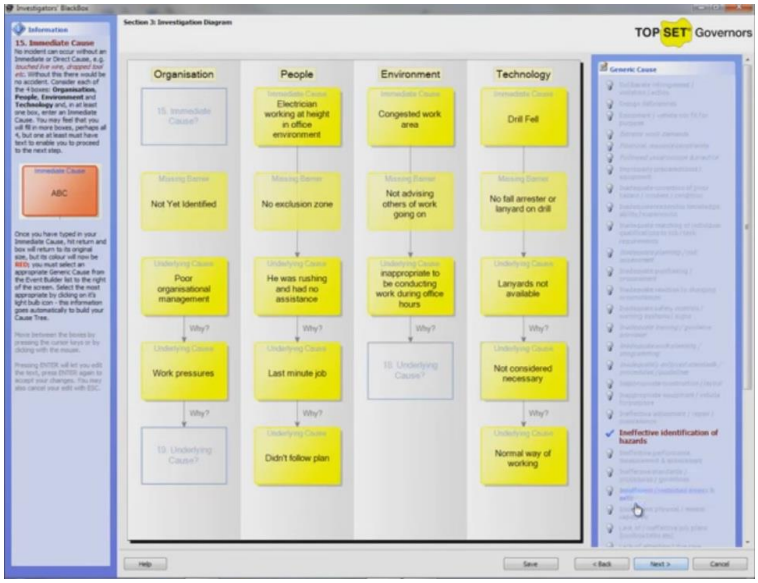
0730 – 0930	***Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd)*** *Key Performance Indicators*
0930 – 0945	*Break*
0945 – 1100	***Jargon for Communicating PSM Requirements to Others Throughout the Organization (cont'd)*** *How to Evaluate Program Compliance Throughout 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*

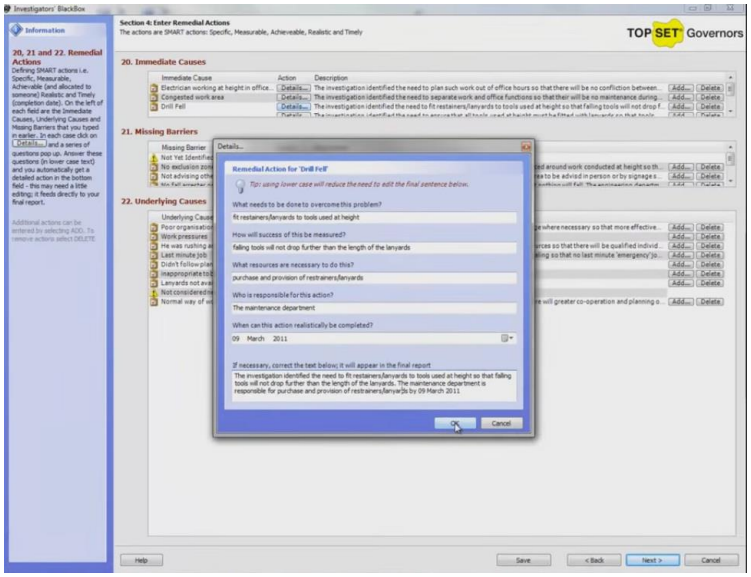
Day 5

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*

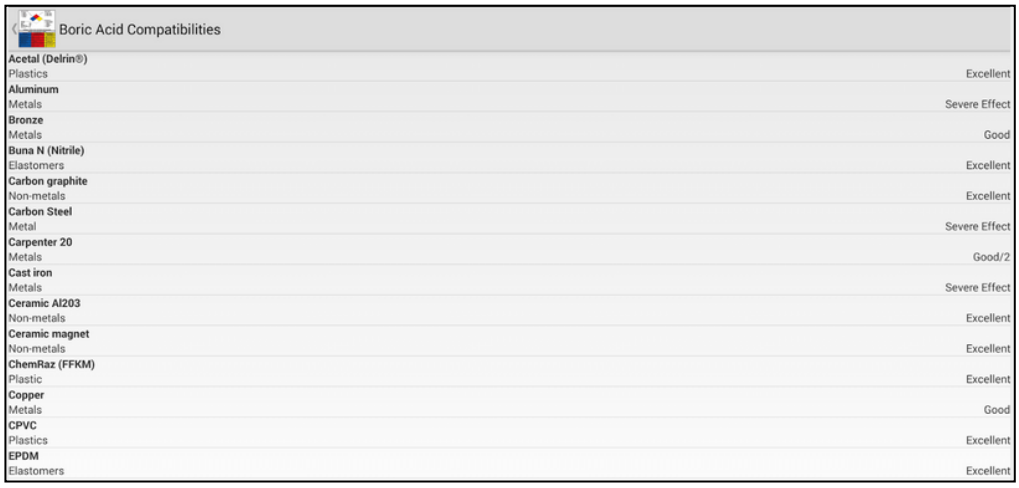
Simulators (Hands-on Practical Sessions)

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".

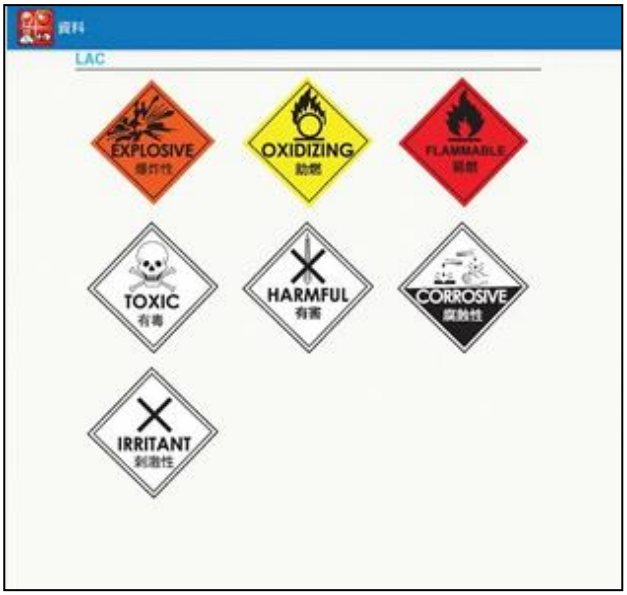




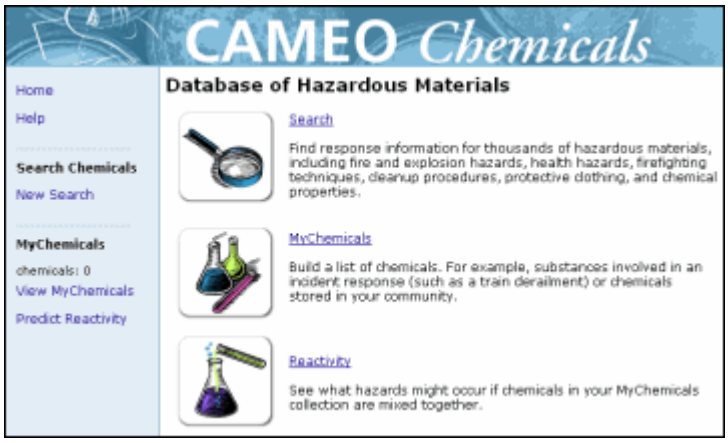
BlackBox Software Tool



Chemical Compatibility 1.1 Simulator



Chemical Safety Database Simulator



CAMEO Chemicals Suite Simulator

Course Coordinator

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