

COURSE OVERVIEW HE0130
Handling of Harmful Chemicals

Course Title

Handling of Harmful Chemicals

Course Date/Venue

Session 1: July 21-25, 2024/The Kooch Al Noor Meeting Room, The H Hotel, Sheikh Zayed Road, Dubai, UAE

Session 2: August 18-22, 2024/Hourous Meeting Room, Holiday Inn Suites Maadi, Cairo, Egypt



Course Reference

HE0130

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.

Everybody in industrial society is exposed to some sort of hazardous materials while at work. This course reviews several aspects of handling these hazardous materials. Some of the topics such as ACGIH and OSHA guidelines, MSDS's and label regulations will be covered.



A high percentage of hazardous materials incidents are caused by human error and lack of proper training. The number of such incidents may be greatly reduced by the thorough training of employees. The attendees will be expected to work through calculations involving ppm, and mg/m³ for gases produced by vaporization from open tanks and from the filling of containers. With these calculations in hand, lower flammability limits, upper flammability limits and flash points will be determined.



This course is designed to introduce the attendee to the safe handling of hazardous materials in the workplace. It will review how toxic materials enter the body, the rate of how such materials may fill a room, and how to protect oneself from exposure by correct ventilation methods and other disposal procedures. The attendee will be expected to do several example problems/calculations during this course thus gaining a sense of confidence in this important area.

Because nearly all processes produce materials that need to be disposed of, the attendees will be introduced to the correct methods for filling hazardous waste manifest, the types of response plans needed for accidents and Community Right-to-Know forms will be reviewed.

Some classical accidents will be reviewed and some of the precautions that need to be followed so that such accidents do not happen in the attendees' workplace. Finally, an introduction to risk assessment and to simple contamination models for groundwater, air, and soil will be reviewed.

Course Objectives

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

- Apply and gain an in-depth knowledge on handling hazardous materials and chemicals
- Identify hazardous materials and demonstrate the proper use of material safety data sheets
- Analyze the various hazardous materials categories and differentiate the other types of hazards including the flammables, combustibles, explosives and oxidizers
- Perform risk assessments, recognize contamination models and identify acute and chronic health effects of toxic substances and carcinogens
- Employ the principles, controls and concepts of hazardous materials management system
- Demonstrate timely and efficient emergency response procedures during leakage, spillage and accidents

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 handling hazardous materials and chemicals for all production, operation, maintenance, transportation, logistics and warehouse staff. Further, the course is a must for all HSE (Health, Safety & Environmental) staff and management.

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 Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:


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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.

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.
Cairo	US\$ 5,500 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 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 **40 years** of field experience in teaching/training and hands-on experience within the **Oil & Gas** industries. He is well-versed in the areas of **Chemical Hazards, Chemical Monitoring & Protection, Chemical Spill Clean Up, Strategic Planning, Environmental Management System (EMS), 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, Accident & Incident Investigation, Emergency Response, Hazard Recognition, Hazard Assessment, Risk Control, Risk Monitoring Techniques, Radioactive Chemicals, Emergency Procedures, First Aid & PPE, MSDS, Security Management, Crisis Management, Environmental 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's 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.

Accommodation

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

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 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction Definition • Material Safety Data Sheets • Hazards • Demonstration
0930 – 0945	Break
0945 – 1100	Identification of Hazardous Materials
1100 – 1215	Material Safety Data Sheets (MSDS)
1215 – 1230	Break
1230 – 1330	Hazardous Material Categories
1330 – 1420	Hazardous Material Table (HMT)
1420 - 1430	Recap
1430	Lunch & End of Day One

Day 2

0730 -0830	Physical Hazards
0830 - 0930	Flammables/Combustibles/Explosives/Oxidizers
0930 - 0945	Break
0945 – 1100	Oxidizing & Reducing Agents
1100 – 1200	Toxicology & Industrial Hygiene
1200 – 1215	Break
1215 – 1330	Hazards of Volatile Liquids
1330 - 1420	Accidents
1420 - 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0830	Risk Assessment
0830 – 0930	Contamination Models
0930 - 0945	Break
0945 – 1100	Physical Hazards
1100 – 1200	Flammable Liquids Storage • Handling • Spill management • Disposal • Legal Obligations to Local Authority
1200 – 1215	Break
1215 – 1330	Basic & Applied Hazardous Materials Management Principles, Controls & Concepts
1330 - 1420	Fires & Explosions
1420 - 1430	Recap
1430	Lunch & End of Day Three



Day 4

0730 – 0830	Hazardous Materials Management
0830 - 0930	Corrosives & Irritants
0930 - 0945	Break
0945 – 1100	Toxic Substances & Carcinogens
1100 – 1200	Acute & Chronic Health Effects
1200 – 1215	Break
1215 – 1330	Container Labels
1330 - 1420	Basic First Aid for Injuries Caused by Chemicals
1420 - 1430	Recap
1430	Lunch & End of Day Four

Day 5

0730 – 0830	Emergency Response
0830 – 0930	Spillage/Leakage/Accident Procedures
0930 – 0945	Break
0945 – 1045	Personal Protective Equipment Hazchem Suit • Breathing Apparatus • Basic Protection • Respirators
1045 – 1145	Off Site Risks Home • Urban Areas • Shopping Centre Commercial Areas.
1145 – 1200	Break
1200 – 1300	References
1300 – 1345	Open Forum
1345 - 1400	Course Conclusion
1400 – 1415	POST-TEST
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 our “Chemical Compatibility 1.1 Software”, “Chemical Safety Database Software”, “CAMEO Chemicals Suite Software and ERG 2012 Software”.

Boric Acid Compatibilities	
Acetal (Delrin®)	Excellent
Plastics	
Aluminum	Severe Effect
Metals	
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

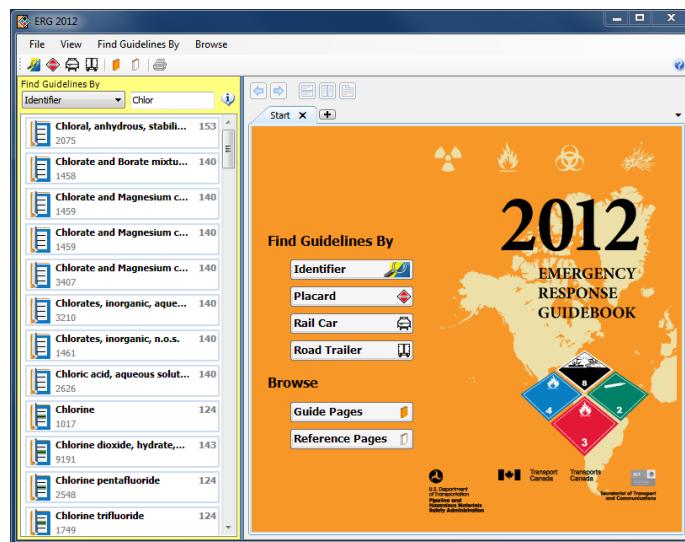
Chemical Compatibility 1.1 Software



Chemical Safety Database Software



CAMEO Chemicals Suite Software



ERG 2012 Software

Course Coordinator

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