



COURSE OVERVIEW HE2042

Industrial Hygiene Measurement & Assessment in Workplace

Course Title

Industrial Hygiene Measurement & Assessment in Workplace

Course Date/Venue

August 31-September 04, 2025/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

Course Reference

HE2042

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 the state-of-the-art industrial hygiene simulator.

This course is designed to provide participants with a detailed and up-to-date overview of Industrial Hygiene Measurement & Assessment in Workplace. It covers the sampling equipment and chemical hazard assessment and monitoring; the noise and vibration physical hazards including radiation, temperature extremes and pressure; the biological hazards, indoor air quality and ergonomics and human factors; and the hierarchy of controls, engineering controls, administrative controls, work practices and personal protective equipment (PPE).



During this interactive course, participants will learn the respiratory protection programs and PPE selection, use and limitations; the ventilation system design and evaluation and control effectiveness assessment; the risk assessment and management, regulatory framework and compliance; the comprehensive industrial hygiene programs and continuous improvement; the cost-benefit analysis and control and integration with safety and environmental programs; the emerging hazards and new technologies; and the total worker health concepts and future trends in industrial hygiene.



Course Objectives

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

- Apply and gain an in-depth knowledge on industrial hygiene measurement and assessment in workplace
- Discuss the sampling equipment and chemical hazards and carryout chemical hazard assessment and monitoring
- Recognize noise and vibration physical hazards including radiation, temperature extremes and pressure
- Identify the biological hazards and indoor air quality as well as ergonomics and human factors
- Carryout hierarchy of controls, engineering controls, administrative controls and work practices and personal protective equipment (PPE)
- Discuss the respiratory protection programs, PPE selection, use, and limitations, ventilation system design and evaluation and control effectiveness assessment
- Apply risk assessment and management and discuss regulatory framework and compliance
- Develop comprehensive industrial hygiene programs and apply program evaluation and continuous improvement
- Employ cost-benefit analysis and control and integration with safety and environmental programs as well as discuss emerging hazards and new technologies, total worker health concepts and future trends in industrial hygiene

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 industrial hygiene measurement & assessment workplace for health and safety professionals, occupational health specialists including physicians, nurses. Specialists in subjects such as acoustics, ergonomics, human factors, occupational psychology, work organisation, biosafety, engineering, analytical chemistry and those who want a broader appreciation of how their role interfaces with other professions over health issues in the workplace will find this course beneficial.

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

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. Peter Jacobs, is a **Senior HSE Consultant** with over **25 years** of extensive experience within **Oil & Gas, Refinery and Petrochemical** industries. His wide experience covers in the areas of **Incident Command & Report Writing, HAZOP, HAZMAT, HAZID, Health Risk Assessment, Modern Safety Risk Management, Process Risk Management, Root Cause Analysis Techniques, HSE Management System Development & Implementation, SAESI Hazardous Materials** for the **First Responder Operations (NFPA 472), Industrial Safety &**

Housekeeping, Job Safety & Hazard Analysis, Hazardous Substances Measurement, Workplace Control, Physical Agents, Emergency Response, Chemical & Biological Operations, Basic Safety & Loss Prevention, Safety in Chemical Laboratory, Confined Space Safety, Industrial Hygiene, Occupational Health & Hygiene, Ergonomics, Biological Assessment, Radiation with Radon/Thoron Assessment, Radiation Protection Safety, Radiation Monitoring, Natural Radiation Sources, Nuclear Regulatory Act, Industrial Ventilation, Air Pollution Dispersion Modelling, Basic Clandestine Drug Laboratory Investigation, Chemical Engineering, Fire Safety & Evacuation, Evacuation Safety, Safety Orientation, Hand & Power Tools Safety, Isokinetic Stack Sampling, Dust Exposure, Quantifying Workplace Stressors, Noise & Airborne Pollutants, Thermal Stress, Illumination, Mine Health & Safety, Statistical Method Validation, Legal Audit Compliance, Riot & Crowd Control, ISO 14000, OHSAS 18000, ISO 17025 and ISO 9000.

During his career life, Mr. Jacobs has gained his practical and field experiences through his various significant positions and dedication as the **Forensic Science Laboratory Manager, Occupational Hygienist, Radiation Protection Officer, Lead Practitioner, Safety, Health & Environmental (SHE) Specialist, First Responder, OHS Inspector, Ambulance Assistant and LPG Distributor Auditor** from various international companies like the Sedulitas, Richards Bay Minerals, Sasol and South African Police Service.

Mr. Jacobs has a **Master's degree in Public Health – Occupational Hygiene, a National Diploma in Purchasing Management** and held an Intermediate Certificate in Mine Environmental Control an **Accredited South African Emergency Services Institute (SAESI)**. Further, he is a **Certified Instructor/Trainer**, an Appointed Commissioned Officer, a SAIOH/ IOHA President, an Assessor/Moderator of Health & Welfare SETA, a **Registered Occupational Hygienist** of the Southern African Institute for Occupational Hygiene, awarded as a SAIOH **Occupational Hygienist** of the Year Award and a well-regarded member of the British Occupational Hygiene Society (**BOHS**), Mine Ventilation Society of South Africa (MVSSA) and South African Radiological Protection Association (SARPA). He has further delivered numerous trainings, courses, seminars, workshops and conferences worldwide.



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.

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 workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 31st of August 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to Sampling Equipment & Chemical Hazards Introduction to Industrial Hygiene Principles and Concepts • Overview of Sampling Methodologies and Strategies • Types of Sampling Equipment and Media (Personal versus Area Sampling) • Calibration Techniques and Quality Assurance • Introduction to Chemical Hazards in the Workplace • Air Sampling Equipment Demonstration • Hands-On Practice with Sampling Pumps and Direct-Reading Instruments • Documentation and Chain of Custody Procedures
0930 – 0945	Break
0945 – 1030	Chemical Hazard Assessment & Monitoring Occupational Exposure Limits (PELs, TLVs, RELs) • NIOSH Sampling Procedures and References • Qualitative Chemical Assessment Different Methodologies
1030 – 1130	Chemical Hazard Assessment & Monitoring (cont'd) Quantitatively Chemical Assessment Personal Sampling • Quantitatively Sampling Methods and Techniques
1215 – 1230	Break
1230 – 1330	Chemical Hazard Assessment & Monitoring (cont'd) Gas and Vapor Monitoring Techniques • Particulate Matter Sampling • Laboratory Analysis Methods • Case Studies in Chemical Exposure Assessment
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, 01st of September 2025

0730 – 0830	Physical Hazards – Noise & Vibration Measurement of Sound and Vibration • Noise and Vibration Qualitative and Quantitative Assessments • Noise and Vibration Measurement Equipment and Techniques • Hearing Conservation Programs
0930 – 0945	Break
0945 – 1100	Physical Hazards – Noise & Vibration (cont'd) Vibration Hazards (Hand-Arm and Whole-Body) • Noise and Vibration Control Strategies • Practical Exercises in Noise Monitoring • Audiometric Testing and Hearing Protection



1100 – 1215	Physical Hazards – Radiation, Temperature Extremes & Pressure Measurement, Assessment and Control of Radiation (Ionizing versus Non-Ionizing) • Thermal Stress (Heat and Cold) • Measurement of Thermal Environments
1215 – 1230	Break
1330 – 1420	Physical Hazards – Radiation, Temperature Extremes & Pressure (cont'd) Heat Stress Indices (WBGT, Heat Index) • Cold Stress Prevention • Abnormal Pressure Environments • Control Measures for Physical Hazards
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, 02nd of September 2025

0730 – 0830	Biological Hazards & Indoor Air Quality Types of Biological Hazards (Bacteria, Viruses, Fungi, Parasites) • Sampling Methods for Biological Agents • Infectious Disease Prevention in the Workplace • Bloodborne Pathogens Standard
0930 – 0945	Break
0945 – 1100	Biological Hazards & Indoor Air Quality (cont'd) Indoor Air Quality Concerns • Building-Related Illnesses and Sick Building Syndrome • IAQ Investigation Methods • Ventilation Assessment and Control Strategies
1100 – 1215	Ergonomics & Human Factors Principles of Ergonomics • Musculoskeletal Disorders and Risk Factors • Anthropometry and Workplace Design • Ergonomic Assessment Tools
1215 – 1230	Break
1230 – 1330	Ergonomics & Human Factors (cont'd) Office Ergonomics • Manual Material Handling • Ergonomic Interventions and Solutions • Practical Ergonomic Assessment Exercises
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, 03rd of September 2025

0730 – 0830	Hazard Control Strategies Hierarchy of Controls • Engineering Controls (Ventilation, Isolation, Enclosure) • Administrative Controls and Work Practices • Personal Protective Equipment (PPE)
0930 – 0945	Break
0945 – 1100	Hazard Control Strategies (cont'd) Respiratory Protection Programs • PPE Selection, Use and Limitations • Ventilation System Design and Evaluation • Control Effectiveness Assessment
1100 – 1215	Risk Assessment & Management Risk Assessment Methodologies • Exposure Assessment Strategies • Qualitative versus Quantitative Risk Assessment • Risk Characterization and Communication
1215 – 1230	Break



1230 – 1330	Risk Assessment & Management (cont'd) <i>Exposure Modeling Techniques • Statistical Analysis of Exposure Data • Uncertainty and Variability in Risk Assessment • Risk Management and Decision-Making</i>
1420 – 1430	Recap <i>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</i>
1430	<i>Lunch & End of Day Four</i>

Day 5: Thursday, 04th of September 2025

0730 – 0830	Regulatory Framework & Compliance <i>OSHA Standards and Compliance • Other Regulatory Agencies (NIOSH, EPA, ACGIH) • Record-Keeping Requirements • Written Program Requirements</i>
0930 – 0945	<i>Break</i>
0945 – 1100	Regulatory Framework & Compliance (cont'd) <i>Workplace Inspections and Audits • Compliance Strategies • Preparing for OSHA Inspections • International Standards and Guidelines</i>
1100 – 1230	Industrial Hygiene Program Management & Emerging Issues <i>Developing Comprehensive IH Programs • Program Evaluation and Continuous Improvement • Cost-Benefit Analysis of Control • Integration with Safety and Environmental Programs</i>
1230 – 1245	<i>Break</i>
1245 – 1345	Industrial Hygiene Program Management & Emerging Issues (cont'd) <i>Emerging Hazards and New Technologies • Total Worker Health Concepts • Future Trends in Industrial Hygiene</i>
1345 – 1400	Course Conclusion <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i>
1400 – 1415	POST-TEST
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>



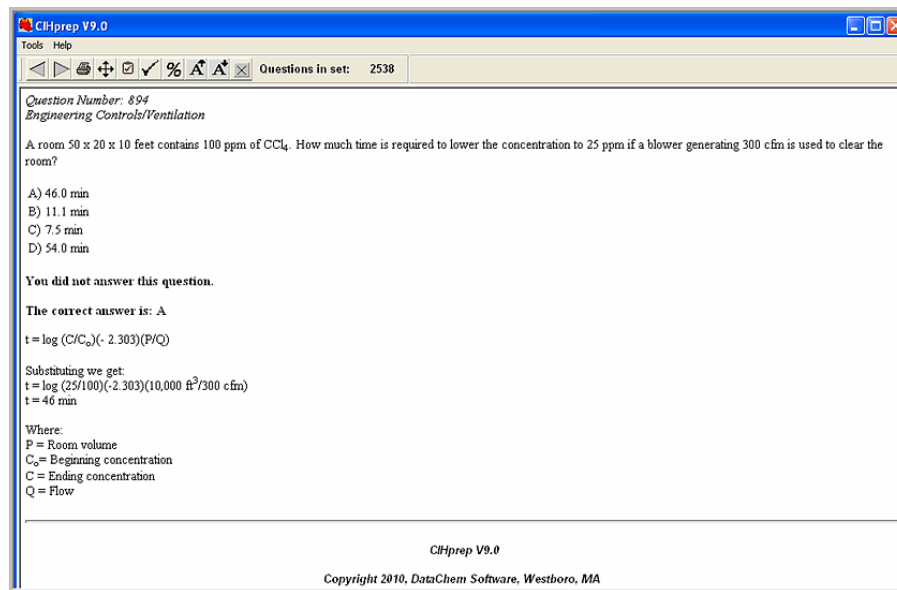
Simulators (Hands-on Practical Sessions)

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 state-of-the-art “Workplace Risk Assessment”, “Industrial Hygiene Virtual Laboratory” and “CIHprep V9.0 ” simulators.

Workplace Risk Assessment



Industrial Hygiene Virtual Laboratory Simulator



CIHprep V9.0 Simulator

Course Coordinator

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