COURSE OVERVIEW HE2042
Industrial Hygiene Measurement & Assessment in Workplace

Course Title
Industrial Hygiene Measurement & Assessment in Workplace

Course Date/Venue
July 06-10, 2025/Markab 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, 06th of July 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)*** *Quantitively Chemical Assessment Personal Sampling • Quantitively 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, 07th of July 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, 08th of July 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, 09th of July 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*

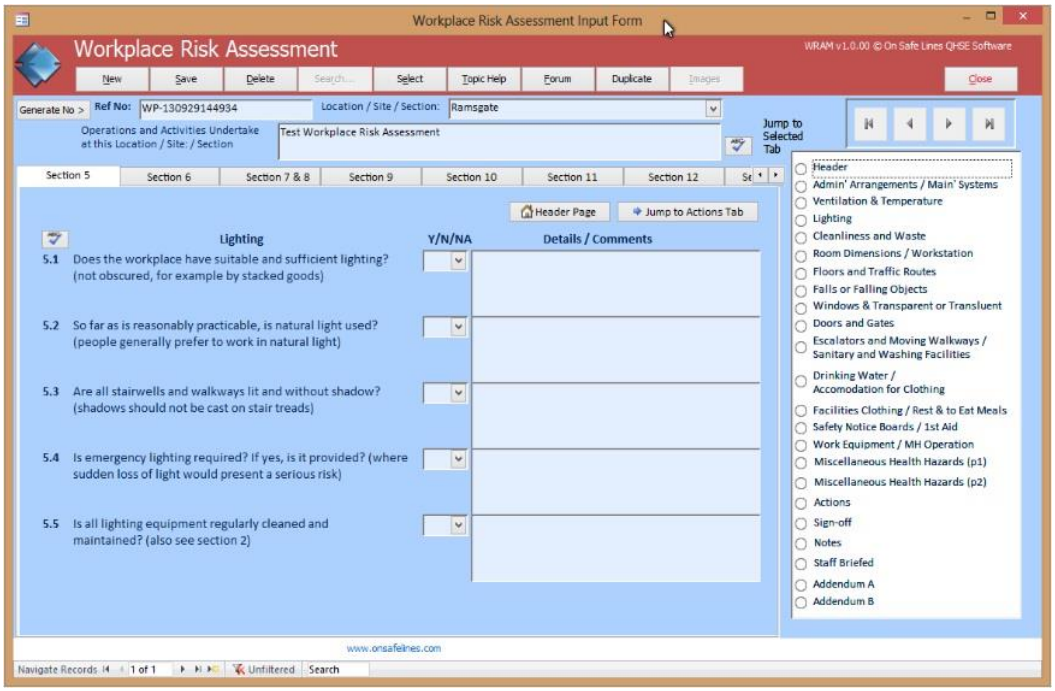
1230 – 1330	***Risk Assessment & Management (cont'd)*** *Exposure Modeling Techniques • Statistical Analysis of Exposure Data • Uncertainty and Variability in Risk Assessment • Risk Management and Decision-Making*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

Day 5: ***Thursday, 10th of July 2025***

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

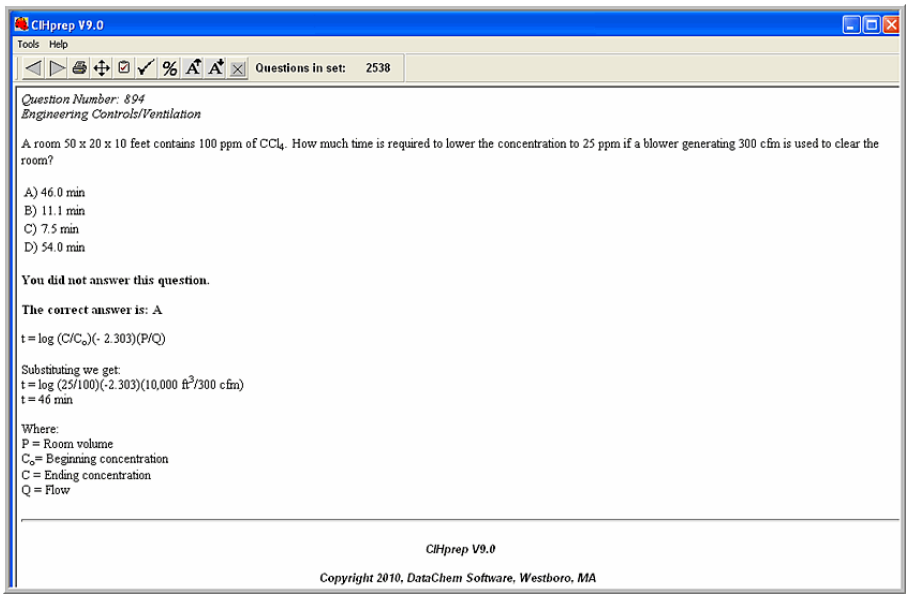
Simulators (Hands-on Practical Sessions)

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 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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