# COURSE OVERVIEW HE0918
# Industrial Hygiene Certification Program
# OHTA201: Basic Principles of Occupational Hygiene
*(Accredited by OHTA)*

**Course Title**
Industrial Hygiene Certification Program
OHTA201: Basic Principles of Occupational Hygiene (Accredited by OHTA)

**Course Date/Venue**
December 15-19, 2024/ Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

**Course Reference**
HE0918

**Course Duration**
Five days/3.6 CEUs/36 PDHs

3.6 CEUs (36 PDHs) AWARD

H-STK© INCLUDED

**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.***

This course is designed to provide participants with a comprehensive overview of industrial hygiene and occupational health hazards. Participants will get an in-depth training on occupational health and hygiene issues and will learn about hygiene assessment and control principles in dealing with health hazards. The course develops the practical skills of the participants in the application part of occupational health issues and occupational hygiene measuring parameters. Participants will learn as well the practical skills in the application of hygiene assessments. It completely covers the day to-day work practices and job requirements of OH officers and hygienists. It is a unique blend of practical exercises and theoretical training in the subject.

The course is dealing with general principles and methods of controlling occupational health hazards basically to ensure that employees exposure to harmful chemical and physical agents doesn't result in occupational illness.
After the completion of this course, OH officers & hygienists will learn about the types of industrial hygiene control measures to be installed depending on the nature of harmful substance/agents and its entry into the body and how to reduce and take control measures for the contamination.

Process Industry deals with materials and products that are toxic, hazardous and harmful to human health and environment. Therefore, it is mandatory requirement for process companies to train occupational health officers and hygienists in how to understand the hazard, measure the toxic limit and exposure and take immediate control measures and permanent control measures based on preventive planning.

This course will help the OH officers and hygienist possess the adequate skills to implement the control methodology. They will also learn the toxicology and its effect on human and broad range of potential hazards, all the biological agents, harmful chemicals, construction materials which pose health hazards, physical stressors as well as total understanding of process technology and work practices.

The course will help participants to understand the circumstances surrounding an exposure hazard and choosing method(s) that will provide adequate control, lower exposure and path of its control to workers, employees work patterns and use of remedial measures.

The course will provide introductory principles of occupational hygiene as the basis for anticipation, recognition, evaluation and control of hazards that can be encountered in the workplace. On completing this course successfully, the participants will have a basic understanding of the following:-

- the value of occupational hygiene and the role of the occupational hygienist
- the range of hazards (physical and chemical) in the workplace
- hazard recognition techniques
- sources and potential routes of exposure
- hazard evaluation, exposure assessment and the measurement processes
- methods of controlling exposure
- the management of occupational hygiene programmes

The course is normally run as a taught course over 5 days (minimum of 36 hours including practical/demonstration sessions, overnight questions and guided reading). There will be a 20 short answer question “open book” examination with an allowed time of 60 minutes.

## Course Objectives

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

- Apply and gain a basic knowledge on occupational hygiene principles
- Define occupational hygiene and discuss its history, importance, qualifications and careers
- Determine human physiology including metabolism, respiratory system, circulatory system, sight, hearing and heat regulations
- Recognize chemical hazards including terminology and information gathering, effects on the body, material form, hazard processes, organic chemical processes and other processes
- Identify physical hazards covering noise, vibration, thermal stress, electromagnetic spectrum and the various bands of non-ionizing radiation, lighting and assessment in the workplace, ionizing radiation, musculoskeletal

injuries, ergonomics and the role of the ergonomist, hazards associated with the use of display screen equipment, stress and management

- Evaluate hazards and assess exposure in measurement of gases vapours, dusts and physical hazards
- Employ hazard control and explain elimination or substitution of hazard, basic principles of ventilation, local exhaust ventilation design, personal protection and general ventilation and air conditioning

## 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 principles in industrial hygiene 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

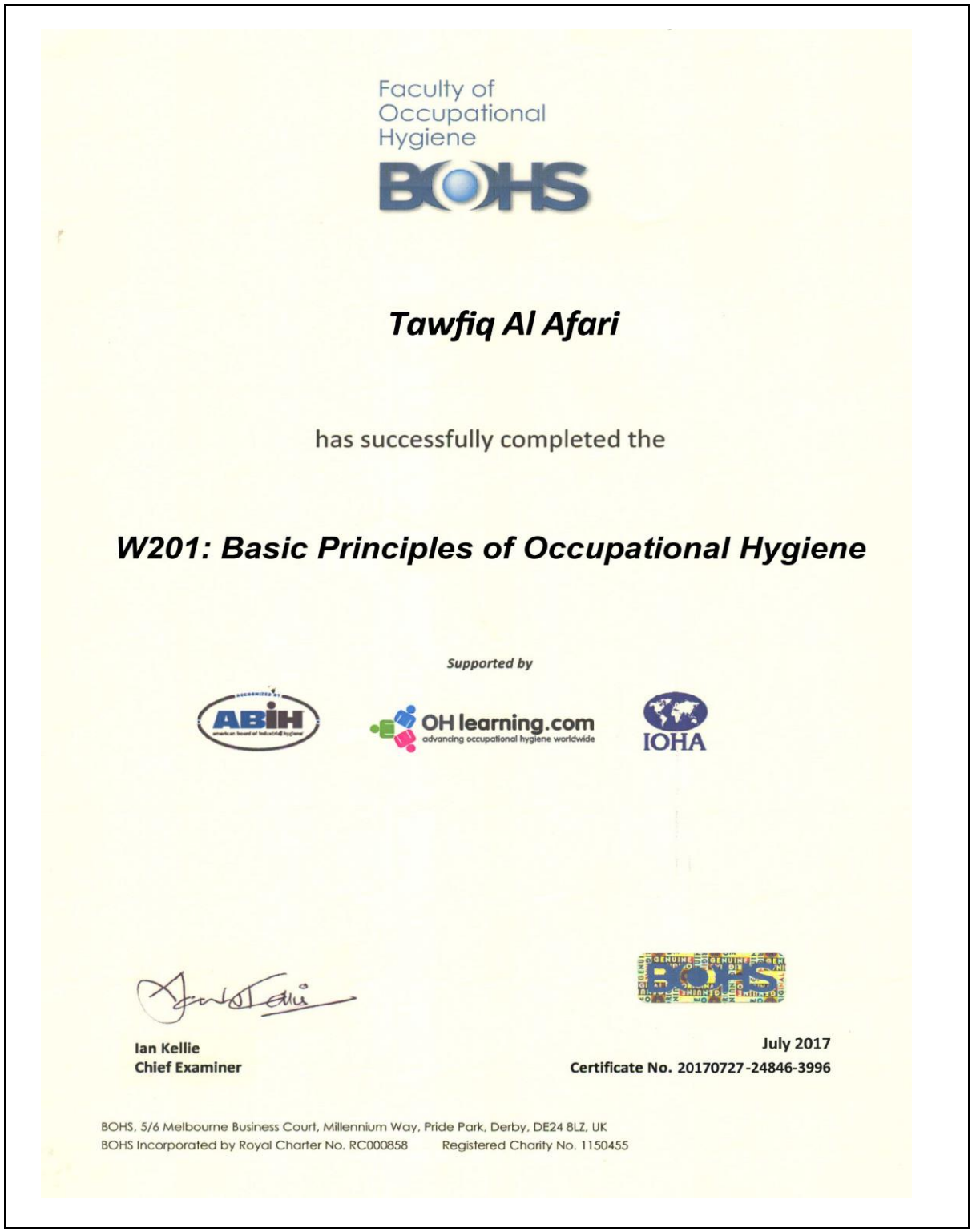
In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

## Course Certificate(s)

(1) BOHS Certificates will be issued to participants who have successfully completed the course and passed the exam at the end of the course.

**BOHS Certificate(s)**

The following certificate is a sample of the BOHS certificates that will be issued to successful candidates:-



Faculty of Occupational Hygiene

BOHS

**Tawfiq Al Afari**

has successfully completed the

**W201: Basic Principles of Occupational Hygiene**

*Supported by*

ABIH OH learning.com advancing occupational hygiene worldwide IOHA

Ian Kellie
Chief Examiner

July 2017
Certificate No. 20170727-24846-3996

BOHS, 5/6 Melbourne Business Court, Millennium Way, Pride Park, Derby, DE24 8LZ, UK
BOHS Incorporated by Royal Charter No. RC000858 Registered Charity No. 1150455

(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:** 28-Apr-16

**HTME No.** PAR15550

**Participant Name:** Khalid Al Badawi

| Program Ref. | Program Title | Program Date | No. of Contact Hours | CEU's |
|---|---|---|---|---|
| HE0918 | W201: Basic Principles of Occupational Hygiene (Accredited by OHTA-BOHS) | April 24-28, 2016 | 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 has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102, 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

Haward Technology is accredited by the following international accreditation organizations:-

- The British Occupational Hygiene Training Association (OHTA-BOHS)

  Haward Technology is an OHTA Approved Training Provider under the W201 and W500 series modules that promote better standards of occupational hygiene practice throughout the world. OHTA is the British Occupational Hygiene Training Association.

  Haward Technology supports hygiene professionals who wanted people around the world to enjoy the benefits of healthy working environments.

- 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 **3.6 CEUs** (Continuing Education Units) or **36 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.

## 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**, OTHA-BOHS is a **Senior HSE Consultant** with almost **25 years** of extensive experience within **Oil & Gas**, **Refinery** and **Petrochemical** industries. His wide experience covers in the areas of **Measurement of Hazardous**, **Incident Command & Report Writing**, **HAZOP**, **HAZMAT**, **HAZID**, **Health Risk** Assessment, Modern **Safety Risk** Management, **Process Risk** Management, **Root Cause Analysis** Techniques, , **Industrial Hygiene**, **Occupational Health**, Safety & Environment, **HSE Management System** Development & Implementation, Handling **Hazardous Chemicals**, **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. 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$ 7,500** 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 course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

***Day 1: Sunday 15th of December 2024***

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|---|---|
| *0730 – 0745* | *Registration & Coffee* |
| *0745 – 0800* | *Welcome & Introduction* |
| *0800 – 0815* | ***PRE-TEST*** |
| *0815 – 0915* | ***Introduction***<br>*Detailed Explanation of Industrial Hygience & Associated Terminologies ● Definition of Occupational Hygiene ● Regulations Related to Industrial Hygiene ● History & Background of the Development of Occupational Hygiene ● Identification of Industrial Hygiene Aspects in Organization ● The Importance of Occupational Hygiene Today ● Overview of Qualifications & Careers in Occupational Hygiene ● OSHA: Process Safety Management Regarding Industrial Hygiene ● Evaluation of Industrial Hygiene ● Industrial Hygiene Control* |
| *0930 – 0945* | *Break* |
| *0945 – 1200* | ***Human Physiology***<br>*General Metabolism ● Respiratory System* |
| *1200 – 1300* | *Lunch* |
| *1300 – 1430* | ***Human Physiology (cont'd)***<br>*Circulatory System ● Sight* |
| *1430 – 1445* | *Break* |
| *1445 – 1620* | ***Human Physiology (cont'd)***<br>*Hearing ● Heat Regulation* |
| *1620 – 1630* | ***Recap*** |
| *1630* | *End of Day One* |

***Day 2: Monday 16th of December 2024***

| | |
|---|---|
| *0730 – 0930* | ***Chemical Hazards Recognition: Terminology & Information Gathering***<br>*Hazard & Risk (Definition of Terms) ● Sources of Information (Safety Data Sheets, Guidance Documents, Literature, Web Sites, COSHH Essentials) ● Basic Principles of Toxicology (Routes of Entry into The Body, Metabolism, Effects on the Body, Types of Effect, Toxicity Testing)* |
| *0930 – 0945* | *Break* |
| *0945 – 1200* | ***Chemical Hazards Recognition: Material Form***<br>*Gases, Vapours, Aerosols ● Dusts (Respirable & Inhalable) ● Fumes ● Vapour Pressure* |
| *1200 – 1300* | *Lunch* |
| *1300 – 1430* | ***Chemical Hazards Recognition: Hazardous Processes***<br>*Mineral Materials (Silica, Asbestos, Machine Made Mineral Fibre (MMMF)) ● Metal Processes (Metal Refining, Machining, Treatments, Welding)* |
| *1430 – 1445* | *Break* |
| *1445 – 1620* | ***Chemical Hazards Recognition: Hazardous Processes (cont'd)***<br>*Organic Chemical Processes (Solvents, Paints, Hydrocarbons & Their Use, Pesticides, Plastics & Polymers, Pharmaceuticals) ● Other Processes (Woodworking, Biological Hazards)* |
| *1620 – 1630* | ***Recap*** |
| *1630* | *End of Day Two* |

**Day 3: Tuesday 17th of December 2024**

| | |
|---|---|
| 0730 – 0930 | ***Physical Hazards Recognition***<br>*Noise (Overview of the Physics of Sound & Units of Measurement & The Effects of Noise) ● Vibration (Overview of The Physics of Vibration & Its Health Effects on The Whole Body & Locally)* |
| 0930 – 0945 | *Break* |
| 0945 – 1200 | ***Physical Hazards Recognition (cont'd)***<br>*Thermal Stress (Introduction to Human Responses to the Thermal Environment & Ways to Evaluate It) ● Introduction to the Electromagnetic Spectrum & The Various Bands of Non-Ionizing Radiation (Ultra Violet, Infra Red, Microwave, Lasers)* |
| 1200 – 1300 | *Lunch* |
| 1300 – 1430 | ***Physical Hazards Recognition (cont'd)***<br>*Lighting & Assessment in the Workplace (Effects of Poor Lighting & Glare) ● Ionising Radiation (Introduction to Health Effects of Ionizing Radiation, Exposure Assessment & Control Techniques & The Specialist Roles of Those Who Deal With it)* |
| 1430 – 1445 | *Break* |
| 1445 – 1620 | ***Physical Hazards Recognition (cont'd)***<br>*Introduction to Musculoskeletal Injuries, Ergonomics & The Role of the Ergonomist ● Overview of the Hazards Associated with the Use of Display Screen Equipment & How they should be Managed? ● Introduction to Stress & Its Management in the Workplace* |
| 1620 – 1630 | ***Recap*** |
| 1630 | *End of Day Three* |

**Day 4: Wednesday 18th of December 2024**

| | |
|---|---|
| 0730 – 0930 | ***Hazard Evaluation: Exposure Assessment***<br>*Evaluating Exposures to Volatile Toxicants by Monitoring ● Measurements of Gases Vapours & Dusts (Measurements, Analytical Methods, Hygiene Standards & Occupational Exposure Limits)* |
| 0930 – 0945 | *Break* |
| 0945 – 1200 | ***Hazard Evaluation: Exposure Assessment (cont'd)***<br>*Measurements of Gases Vapours & Dusts (Units of Measurement, Time Weighing, Simple Calculations/Algebra, Compliance with Statutory Limits, Standard Setting, Biological Monitoring & Health Surveillance)* |
| 1200 – 1300 | *Lunch* |
| 1300 – 1430 | ***Hazard Evaluation: Exposure Assessment (Physical Hazards)***<br>*Assessment of Physical Hazards (Noise Measurement, Measurement of Thermal Environment)* |
| 1430 – 1445 | *Break* |
| 1445 – 1620 | ***Hazard Evaluation: Exposure Assessment (Physical Hazards) (cont'd)***<br>*Assessment of Physical Hazards (Introduction to Assessment of Vibration, Lighting & Non-Ionising Radiation, Ionising Radiation and Ergonomic Risk Assessment)* |
| 1620 – 1630 | ***Recap*** |
| 1630 | *End of Day Four* |

***Day 5:*** ***Thursday 19th of December 2024***

| | |
|---|---|
| *0730 – 0930* | ***Control of Hazard***<br>*Elimination/Substitution of The Hazard* |
| *0930 – 0945* | *Break* |
| *0945 – 1100* | ***Control of Hazard (cont'd)***<br>*Basic Principles of Ventilation ● Local Exhaust Ventilation Design* |
| *1100 – 1115* | *Lunch* |
| *1115 – 1200* | ***Control of Hazard (cont'd)***<br>*Personal Protection* |
| *1200 – 1300* | *Break* |
| *1300 – 1545* | ***Control of Hazard (cont'd)***<br>*General Ventilation & Air Conditioning* |
| *1545 - 1600* | ***Course Conclusion*** |
| *1600 - 1615* | ***POST TEST*** |
| *1615 – 1630* | *Presentation of Course Certificates* |
| *1630* | *End of Course* |

## MOCK Exam

Upon the completion of the course, participants have to sit for a MOCK Examination similar to the exam of the Certification Body through Haward's Portal. Each participant will be given a username and password to log in Haward's Portal for the MOCK exam during the 7 days following the course completion. Each participant has only one trial for the MOCK exam within this 7-day examination window. Hence, you have to prepare yourself very well before starting your MOCK exam as this exam is a simulation to the one of the Certification Body.

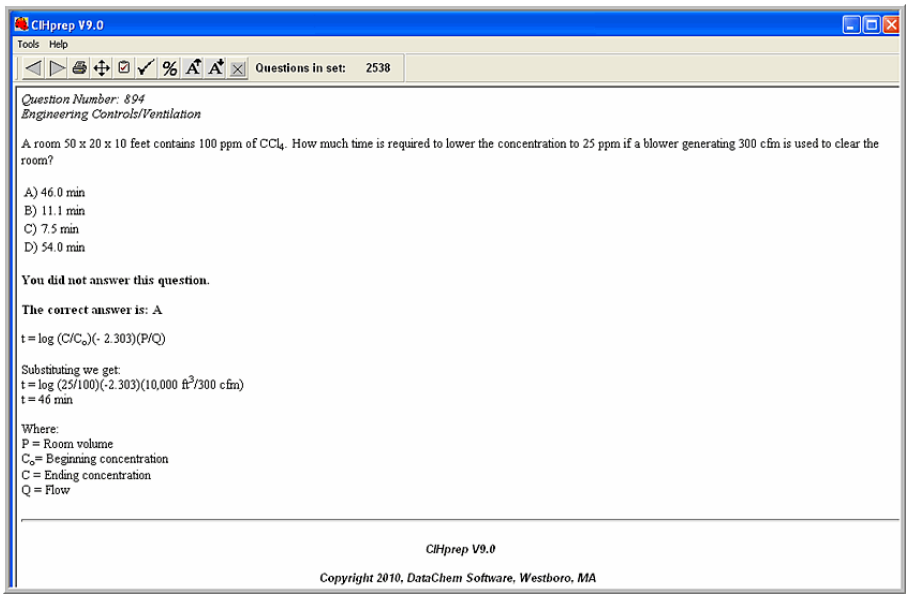
***Day 6: OHTA BOHS Online Exam (to be scheduled within 30 days of course completion)***

| | |
|---|---|
| *0900 - 0915* | ***OHTA-BOHS Exam Registration/Briefing*** |
| *0915 - 1145* | ***OHTA-BOHS Exam*** |
| *1145 - 1200* | *Closing Ceremony* |
| *1200* | *End of Exam* |

## Simulator (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 the state-of-the-art "Industrial Hygiene Virtual Laboratory Simulator", "CIHprep V9.0 Simulator", "Extech 445580: Humidity/Temperature Pen" and "Digital Sound Level Meter".


**Industrial Hygiene Virtual Laboratory Simulator**




**CIHprep V9.0 Simulator**


**Extech 445580: Humidity/Temperature Pen**

**Noise Monitoring Device (Digital Sound Level Meter)**

**Course Coordinator**
Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org