COURSE OVERVIEW HE0187
Industrial Hygiene Certification Program
OHTA503: Noise – Measurement and Its Effects
(Accredited by OHTA)

Course Title
Industrial Hygiene Certification Program: OHTA503: Noise – Measurement and Its Effects *(Accredited by OHTA)*

Course Reference
HE0187

Course Duration
Training: Five days/3.5 CEUs/35 PDHs
Exam: One day/2 Hours
Total: 6 Days

Course Date/Venue

Session(s)	Date	Venue
1	October 07 -11, 2024	Abu Dhabi Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
2	October 21 - 25, 2024	
3	December 09 -13, 2024	

Courses 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 aims to provide the participant with an appreciation of the nature of noise hazards in the workplace and the effects of noise on people. It also details the approach in assessing noise in the workplace and in the general environment and to assess the significance of measurement data against compliance standards.

On completing this course successfully, participants will be able to:-

- Describe the consequences to health and well-being of excessive exposure to noise
- Understand the measurement (including dosimetry) of noise against current standards
- Conduct surveys in the workplace to assess risks from noise
- Advise on the need for and means of control including PPE
- Appreciate and advise on environmental noise assessment
- Understand current standards and good practice in these fields

The course normally run as a taught course over 5 days (including practical/demonstration sessions, lectures, tutorials, guided reading, overnight questions and examination).

This course is designed to provide participants with a detailed and up-to-date overview of OHTA503 Noise Measurement and Its Effects. It covers the physics of sound comprising of sound propagation, properties of sound, sound pressure, power and intensity, level and decibels and human response to sound; the risk assessment and noise surveys, occupational noise management, acoustic parameters and measurement and assessment surveys; the sources of machine noise, electric motors, industrial fans, compressors, pumps, hydraulic noise, mechanical impacts and panel or structure radiated noise; the engineering controls, administrative noise controls and types of hearing protection devices (HPDs); the selection of hearing protection devices; and the HPD rating methods, fitting, visual checks and wearer field test to check fitting.

During this interactive course, participants will learn the HPD requirements, using of hearing protectors, undertaking noise assessments and developing and implementing noise control measures in the workplace; the audiometric testing, rehabilitation, audiometry and reporting and record keeping; the guidelines for an effective hearing conservation programme; the community noise regulations and the factors other than absolute sound level influencing community reaction to noise; and the sound propagation outdoors and measuring environmental noise.

Course Objectives

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

- Achieve the OHTA Certificate in OHTA503: Noise – Measurement and Its Effects
- Discuss the physics of sound covering sound propagation, properties of sound, sound pressure, power and intensity, level and decibels and human response to sound
- Carryout risk assessment and noise surveys, occupational noise management, acoustic parameters and measurement and assessment surveys
- Identify the sources of machine noise, electric motors, industrial fans, compressors, pumps, hydraulic noise, mechanical impacts and panel or structure radiated noise
- Recognize the engineering controls, administrative noise controls and types of hearing protection devices (HPDs)
- Select hearing protection devices and apply HPD rating methods, fitting, visual checks and wearer field test to check fitting
- Comply HPD requirements and develop proper training in use of hearing protectors, training to undertake noise assessments and training to develop and implement noise control measures in the workplace
- Apply audiometric testing, rehabilitation, audiometry and reporting and record keeping
- Implement systematic guidelines for an effective hearing conservation programme
- Review community noise regulations and identify the factors other than absolute sound level influencing community reaction to noise
- Recognize sound propagation outdoors and measure environmental noise efficiently

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 a complete and up-to-date overview of noise assessment and control for health and safety professionals, occupational health specialists including physicians and 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.

Accommodation

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

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.

Training 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.

Exam Fee

US$ 280 per Delegate + **VAT**

Course Certificate(s)

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

OHTA Certificate(s)

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

(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.

Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 14-Nov-23

HTME No. 74852

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE0187	Industrial Hygiene Certification Program: OHTA503: Noise – Measurement and Its Effects *(Accredited by OHTA)*	November 10-14, 2023	35	3.5

Total No. of CEU's Earned as of TOR Issuance Date **3.5**

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Accredited Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2018 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 1-2018 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 | E-mail: info@haward.org | Website: www.haward.org

Certificate Accreditations

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

- Occupational Hygiene Training Association (OHTA)

  Haward Technology is an Approved OHTA Trainer under the OHTA201 and OHTA500 series modules that promote better standards of occupational hygiene practice throughout the world.

  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 **3.5 CEUs** (Continuing Education Units) or **35 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, 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 **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 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

0830 – 0845	*Registration & Coffee*
0845 – 0900	*Welcome & Introduction*
0900 – 0915	***PRE-TEST***
0915 – 0930	***Introduction/Course Outline***
0930 - 1030	***The Physics of Sound*** *Sound Propagation • Properties of Sound • Sound Pressure, Power & Intensity • Levels & Decibels (The Decibel Scale & Use of Levels; Common Sound Levels; Quantifying Sound Levels; Decibel Addition, Subtraction & Averaging; Directivity of Sound Sources; Frequency Characteristics of Sound; Weighted Sound Levels; The Human Audible Range of Hearing & Loudness; Relationship Between Sound Pressure Level & Sound Power Level; Time-Varying Noise Sources)*
1030 - 1045	*Break*
1045 - 1245	***Human Response to Sound*** *The Ear & its Response to Sound*
1245 - 1330	*Lunch*
1330 - 1500	***Risk Assessment & Noise Surveys*** *Occupational Noise Management • Acoustic Parameters & Measurement • Exposure Levels & Legislation for Noise • Acoustical Instrumentation (Sound Level Meters; Sound Measurement Mobile Applications (Apps); Acoustical Calibrators; Frequency Analysis; Personal Noise Dosimeter)*
1500 - 1515	*Break*
1515 - 1630	***Practical 1 - Steady Source***
1630 - 1650	***Overnight Questions***
1650 – 1700	***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*
1700	*End of Day One*

Day 2

0830 – 0930	***Review of Overnight Questions***
0930 – 1030	***Assessment Surveys*** *Instrumentation Requirements for Surveys • Preliminary Survey • Detailed Sound Level Survey • Area and/or Equipment Sound Level Survey • Noise Exposure Survey*
1030 – 1045	*Break*
1045 -1245	***Noise Control Engineering*** *Sources of Machine Noise • Electric Motors • Industrial Fans • Compressors • Pumps • Hydraulic Noise • Mechanical Impacts • Panel or Structure Radiated Noise • Engineering Controls (Some Approaches to Control at Source; Replacement with Low Noise Alternative; Treatment of the Sound Transmission Path) • Buy Quiet • Administrative Noise Controls (Changes to Employee Work Routine; Planning the Layout of the Work Area; Use of Noise Refuge Areas, Control Rooms, Automation, & Remote Monitoring; Regular Maintenance of Equipment; Noise Limits in Specifications)*
1245 - 1330	*Lunch*

1330 – 1500	***Practical 2 – Time Periods & Time Varying Sources***
1500 – 1515	*Break*
1515 – 1545	***Discussion of Practical 2***
1545 - 1630	***Tutorial 1 – Noise Exposure Calculation***
1630 - 1545	***Overnight Questions***
1650 – 1700	***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*
1700	*End of Day Two*

Day 3

0830 - 0930	***Review of Overnight Questions***
0930 – 1030	***Hearing Protector Programme*** *Types of HPDs (Foam Insert Plugs; Pre-molded Plugs; Custom-molded Plugs; Semi-Insert or Canal Caps; Ear Muffs; Combination of Ear Plugs & Ear Muffs; Special Purpose Protectors) • Selecting Hearing Protection Devices • HPD Rating Methods (Octave-band Method; Noise Reduction Rating; Noise Reduction Rating (Subject Fit); Noise Level Reduction Statistic; Single Number Rating; HML Method; Sound Level Conversion; Classification Method) • Fitting (Foam Earplugs; Pre-molded Earplugs; Custom-Molded Earplugs; Semi-Insert/Canal Caps; Earmuffs • Visual Checks • Wearer Field Test to Check Fitting (Individual Hearing Protector Fit Testing; Field Microphone in Real Ear (F-MIRE); Real-Ear Attenuation at Threshold (REAT)) • HPD Requirements (Require Use; Availability; Warning Signs) • Training and Maintenance (Training; Maintenance)*
1030 – 1045	*Break*
1045 - 1130	***Tutorial 2 – Hearing Protection***
1130 - 1245	***Practical Preparation***
1245 - 1330	*Lunch Break*
1330 - 1500	***Practical 3 – Workplace Survey***
1500 - 1515	*Break*
1515 - 1600	***Practical 3 – Workplace Survey***
1600 - 1630	***Preliminary of Data from Practical 3***
1630 - 1650	***Overnight Questions***
1650 – 1700	***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*
1700	*End of Day Three*

Day 4

0830 - 0930	***Review of Overnight Questions***
0930 – 1030	***Education & Training*** *Introduction • Training in Use of Hearing Protectors (Ear, Hearing & Noise; Importance of Protecting Hearing; Selection of Hearing Protectors; Use and Proper Fitting of Hearing Protectors; Maintenance and Storage) • Training to Undertake Noise Assessments (Goals & Objectives; Basic Acoustics; Need for Noise Control; Sound Measurement Instrumentation; Measurement of Workplace Noise; Occupational Noise Assessments; Noise Reduction) • Training to Develop & Implement Noise Control Measures in the Workplace (Goals & Objectives; Noise Sources and Transmission; Understanding Noise Reduction & Control)*
1030 - 1045	*Break*

1045 – 1130	***Audiometric Testing*** *Hearing Disorders (Types of Hearing Loss; Noise Induced Hearing Loss (NIHL); Auditory Effects of Excessive Noise Exposure; Progression of Noise Induced Hearing Loss; Tinnitus; Age-Related Hearing Loss or Presbycusis; Non-organic Hearing Loss) • Rehabilitation • Audiometry (Guide to Audiometric Programme; Equipment Calibration; Understanding the Audiogram; Validity & Factors Affecting Audiometric Results; Audiometric Testing Intervals & Conditions)*
1130 - 1245	***Reporting & Record Keeping*** *Organizational Risk Management Plan • Hazard Identification Assessments • Hazard Control Assessments • Hearing Protector Programmes • Audiometric Monitoring • Continuing Risk Identification & Control Strategy Assessment*
1245 - 1330	*Lunch Break*
1330 - 1400	***Guidelines for an Effective Hearing Conservation Programme*** *Determining HCP Effectiveness • Summary*
1400 - 1500	***Introduction to Environmental Noise*** *Community Noise Regulations (European Union Environmental Noise Directive; United States Federal Government Guidelines & Regulations; Other Approaches to Environmental Criteria) • Factors Other than Absolute Sound Level Influencing Community Reaction to Noise • Sound Propagation Outdoors (Geometrical Divergence (A_{div}); Air Absorption (A_{air}); Environmental Effects (A_{env}); Miscellaneous Attenuation Effects (A_{misc})) • Measuring Environmental Noise*
1500 – 1515	*Break*
1515 - 1545	***Analysis of Data from Practical 3 (cont'd)***
1545 - 1650	***MOCK Examination***
1650 – 1700	***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*
1700	*End of Day Four*

Day 5

0830 - 0930	***Review of Overnight Questions***
0830 – 1030	***Small Group Presentation on Assessment in Workplace***
1030 - 1045	*Break*
1045 - 1245	***Write-up of Practical Exercise***
1245 – 1330	*Lunch*
1330 - 1500	***Program Evaluation***
1500 - 1515	*Break*
1515 - 1615	***Overview & Discussion***
1615 - 1630	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1630 – 1700	*Presentation of Course Certificates*
1700	*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.

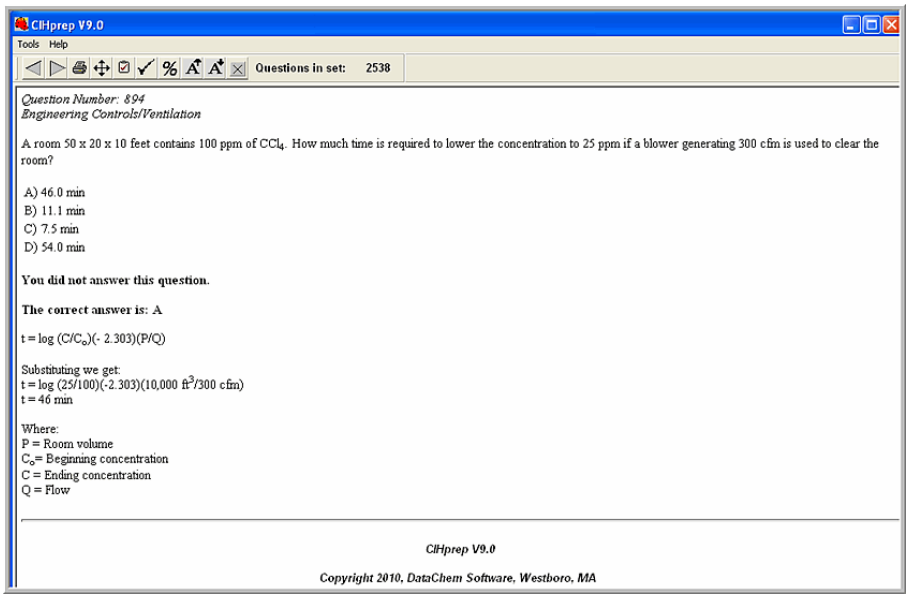
Day 6:	***OHTA Online Exam (to be scheduled within 30 days of course completion)***
0900 – 0945	***OHTA Exam Registration/Briefing***
0945 - 1145	***OHTA Exam***
1145 - 1200	*Closing Ceremony*
1200	*End of Exam*

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 our state-of-the-art "Sound Level Meter", "Industrial Hygiene Virtual Laboratory" and "CIHprep V9.0 " simulators.

Sound Level Meter

Industrial Hygiene Virtual Laboratory Simulator



CIHprep V9.0 Simulator

Course Coordinator
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