

**COURSE OVERVIEW HE0057**  
**Certified Ergonomics Essentials**

**Course Title**

Certified Ergonomics Essentials

**Course Date/Venue**

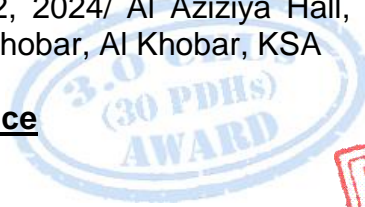
December 08-12, 2024/ Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA

**Course Reference**

HE0057

**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs



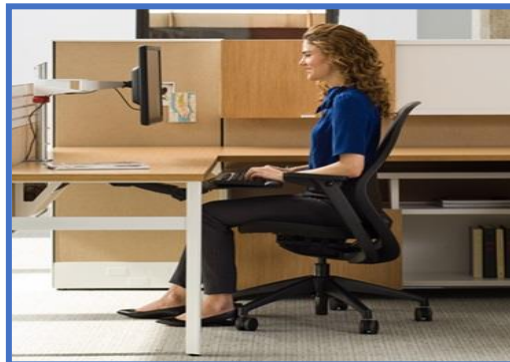
**Course Description**



***This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using industrial hygiene simulator.***



This course aims to provide a broad based introduction to ergonomic principles and their application in design of work, equipment and the workplace. Consideration is given to musculo-skeletal disorders, manual handling, ergonomics aspects of the environment as well as to the social and legal aspects.



On completing this course successfully, the participants will have a basic understanding of the following:-

- Understand and apply ergonomic principles to the creation of safer, healthier and more efficient and effective activities in the workplace
- Understand ergonomic risk assessments and appropriate control measures
- Understand the causes of upper limb disorders and how to reduce them
- Appreciate workplace layout and equipment design
- Appreciate environmental aspects of good ergonomic design

## Course Objectives

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

- Apply and gain an in-depth knowledge on ergonomics essentials
- Recognize ergonomics covering its importance, benefits, process, risk factors, assessments, risk assessment tools, controls and scope of ergonomics
- Discuss occupational ergonomics covering systems of work, human characteristics and limitations, the ergonomist's role, biological ergonomics, body systems and functions, the musculoskeletal system, posture and movement, biomechanics and anthropometry
- Explain work physiology as well as apply systematic ergonomics methods and techniques covering work design, work design, work organization, poor work design problems, user trials and problem solving
- Carryout ergonomics risk management and identify the musculo-skeletal disorder including parts of body at risk, impact of MSDs, characteristics of tasks, work tasks and nature & causes of manual handling disorders
- Assess standards and social aspects through developing ISO standards, ISO/TC 159, training, experience & skill development, health information, health information risk management and measuring the impact of ergonomics
- Apply risk control and determine vision and lighting, noise, thermal environment, vibration, smell, taste and touch
- Recognize clothing and personal protective equipment
- Use pareto analysis and project scheduling using program evaluation and review technique (PERT)

## Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive "Howard 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 ergonomics essentials for health and safety professionals, occupational health specialists including physicians, nurses. Specialists in subjects such as acoustics, ergonomics, human factors, occupational psychology, work organization, 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) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

**Sample of Certificates**

The following are samples of the certificates that will be awarded to course participants:-








**Certified Ergonomics Essentials**


Certification Number: 74852  
 Certification Date: 14-Nov-2022  
 Expiration Date: 14-Nov-2027

This is to certify that **Waleed Al Habeeb** has successfully met the requirements of the **Certified Ergonomics Essentials** Program, HE0057.



*J. Castillo*  
 Mr. Jaryl Castillo  
 Academic Director

Haward Technology is accredited by:




**Ergonomics Essentials**

Certification Program

This program is designed to assist companies in identifying professionals who have satisfied the minimum competencies specified in HE0057.

Haward Technology does not warrant or guarantee the performance of any professional certified under this program.

P.O. Box 26070  
 Abu Dhabi, UAE  
 Tel: +971 2 30 91 714  
 Http://www.haward.org



74852

Haward Technology is accredited by:



- (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)

**CEUs**

**CEU Official Transcript of Records**

TOR Issuance Date: 14-Nov-22  
 HTME No. 74852  
 Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE0057	Certified Ergonomics Essentials	November 10-14, 2022	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **3.0**

TRUE COPY

*J. Castillo*  
 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

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

### Certificate Accreditations


Certificates are accredited by the following international accreditation organizations: -

- 
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

**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.

### 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 Christian** is an **International Expert** in **Safety, Health, Environmental and Quality** with over **25 years** of practical and industrial experience in **NEBOSH International General Certificate in Occupational Health & Safety, Lifting & Rigging Equipment HAZOP, HAZWOPER, HAZMAT, HAZCOM, PHA (Process Hazard Analysis), FMEA, HAZID, ISO 14001, OHSAS 18001, ISO 9001, Process Safety Management (PSM), Safety, Health, Environmental & Quality Management (SHEQ), Behavioral Safety Management, Industrial Hygiene, Human Factors Engineering, Risk Assessment, Fire Fighting, Rope Rescue Operations, Emergency Response** within process industries. He is currently the **President of NKWE** and spearheads the companies major projects and business ventures, where he specializes in the areas of **SHEQ solutions, ISO, Quality Control and OSHA systems**. Previously, he has had much on-hand experience in the initiation and management of projects (technical as well organizational development) including involvement in **design of process plants; the commissioning & decommissioning of process plants; the operational and financial responsibility for large process operations; risk management; operational and maintenance management, crisis and emergency management, accident investigation, risk assessment, hazard identification and emergency preparedness & response (oil spillage and gas explosions)**.

Much earlier in his career, Mr. Christian was a **HAZOP Team Leader** for numerous **HAZOP** studies and he has further managed the **Health, Safety & Environmental and Quality** requirements of a large process company. This included responsibilities as an auditor for compliance against **SHEQ standards, ISO standards** and the **Fatal Risk Control Protocols**. He then facilitated the development and implementation of the above standards as a group and at site level as part of the SHEQ council. Moreover, he established, trained and led a Rope rescue team and a high level emergency care clinic and ambulance service for many years. He still abseils recreationally and leads adventure groups during abseiling activities and serves as a rescue team member for mountain and water emergencies.

During his career life, Mr. Christian has gained his practical and field experience through his various significant positions as the **Plant Manager, Project Metallurgist, Metallurgist, HSE Team Leader, SHEC Superintendent, Mentor, Instructor/Trainer, Acting Technical Manager, Process Plant Superintendent, Acting Project Leader, Acting Plant Superintendent, Appointed Health & Safety & Environmental Superintendent, Production Technician, Acting Senior Shiftsman, Foreman and Learner – Official Extraction Metallurgy** from various companies such as the NKWE Consulting, SAMANCOR, Middleburg Mine Services (Pty) Ltd., Koomfontein Mines, Emelo Mine Services, Gencor Group and South African Defence Force.

Mr. Christian has a **Postgraduate Studies in Advanced Executive Programme** and a **National Higher Diploma (NHD) & a National Diploma in Extraction Metallurgy**. He is also a **Certified/Registered Tutor in NEBOSH International General Certificate, Certified Auditor in OHSAS 18001, ISO 14001 & ISO 9001, a Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer by the Institute of Leadership & Management (ILM), a Six Sigma Black Belt Coach** and holds a Certificate in Facilitate Learning Using a Variety of Given Methodologies **NQF Level 5 (EDTP-SETA)** as a **Certified Facilitator**. He has further delivered innumerable courses, trainings, workshops and conferences globally.





**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, 8<sup>th</sup> of December 2024**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b>International Module W506 Ergonomics Essentials</b>
0930 – 0945	Break
0945 – 1030	<b>Overview of Ergonomics</b> Ergonomics Definition • The Human at Work • Scope of Ergonomics • Benefits of Ergonomics • Occupational Ergonomics • Systems of Work • Human Characteristics & Limitations • Human Error • Teamwork • Ageing Workforce • The Ergonomist’s Role • Biological Ergonomics • Body Systems & Functions
1030 - 1230	<b>Overview of Ergonomics (cont’d)</b> The Musculoskeletal System • Posture & Movement • Biomechanics • Biomechanics & the Musculoskeletal System • Anthropometry • Work Physiology • Psychology at Work • Issues to Consider • Perception & Cognition • Memory • Decision Making • Perception of Risk • Signal Detection Theory
1230 – 1245	Break
1245 – 1420	<b>Overview of Ergonomics (cont’d)</b> Vigilance • Motivation & Behavior • Work Stress • Work Organization • Rest & Work Breaks • Developing an Ergonomics Strategy • Issues to Consider • Workplace Culture & Systems • Macro-Ergonomics • Participatory Ergonomics • Ergonomics in Design • Professional Ergonomist • Ergonomics: Seeing the Whole Picture
1420 – 1430	<b>Recap</b> 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, 9<sup>th</sup> of December 2024**

0730 – 0930	<b>Ergonomics Methods &amp; Techniques</b> Work Design • Work Organization • Poor Work Design/Problems • User Trials • Problem Solving • Ergonomics Risk Management • Hazards & Risks
0930 – 0945	Break
0945 – 1100	<b>Ergonomics Methods &amp; Techniques (cont’d)</b> Ergonomics Hazard Identification • Ergonomics Risk Assessment • Measurements & Information Gathering • Ergonomics Standards • Ergonomics Guidance • Which Ergonomic Assessment Method • Ergonomic Assessment Methods
1100 – 1230	<b>Musculoskeletal Disorders (MSDs)-Part 1</b> Introduction & Definition • Parts of Body at Risk • Impact of MSDs • Characteristics of Tasks





1230 – 1245	Break
1245 – 1420	<b>Musculoskeletal Disorders (MSDs)-Part 1 (cont'd)</b> Examples of Work Tasks • Nature & Causes of Manual Handling Disorders
1420 – 1430	<b>Recap</b> 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, 10<sup>th</sup> of December 2024**

0730 – 0930	<b>Standards &amp; Social Aspects</b> Developing ISO Standards • ISO/TC 159 • Training, Experience & Skill Development • Health Information
0930 – 0945	Break
0945 – 1100	<b>Standards &amp; Social Aspects (cont'd)</b> Health Information Risk Management • Measuring the Impact of Ergonomics
1100 – 1230	<b>Musculoskeletal Disorders (MSDs)-Part 2</b> Musculoskeletal Disorders (MSDs) • Nature & Causes of Manual Handling Disorders • Low Back Disorders • Risk Identification • Risk Assessment Strategies • Detailed Ergonomics Methods • Examples of these Ergonomics Methods • Other Ergonomics Methods
1230 – 1245	Break
1245 – 1420	<b>Musculoskeletal Disorders (MSDs)-Part 2 (cont'd)</b> Risk Control • Example of Workplace Modification • Use of Mechanical Aids • Principles of Manual Handling • General Guidance for Lifting & Handling • Lifting & Lowering Mass Guidance • Work-Related Upper Lim Disorders (WRULDS) • The Upper Limb • Types of Grip • UL: Injury Mechanisms • WRULD: Risk Identification • WRULD: Risk Assessment • WRULD: Risk Control
1420 – 1430	<b>Recap</b> 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, 11<sup>th</sup> of December 2024**

0730 – 0930	<b>Workplace, Job &amp; Product Design -Part 1</b> Work Environment Introduction & Definition • Principles of Work System Design • Layout of Workspaces • General Considerations • Workstation & Equipment Design • Workstation Design -Principles • Workstation Design- Horizontal Work Area
0930 – 0945	Break
0945 – 1100	<b>Workplace, Job &amp; Product Design -Part 1 (cont'd)</b> Workstation Design-Work Position • Workstation Horizontal Working Height • Workstation Design- Viewing Distances & Angles • Workstation Design- Anthropometric Requirements • Equipment Design -Tools
1100 – 1230	<b>Workplace, Job &amp; Product Design -Part 2</b> Chairs & Seating • Optimum Sitting Position • Vehicle Cab Design • Vehicle Cab Design- Seats • Computer (VDT) Workstations • Computer Equipment • Assessing Computer (VDT) Workstations • Information, Displays & Controls







1230 – 1245	Break
1245 – 1420	<b>Workplace, Job &amp; Product Design -Part 2 (cont'd)</b> Information, Displays & Controls – Design Principles • Visual Displays • Auditory Displays • Quantitative & Qualitative Displays • Danger & Information Signals • Safety Signs & Labels • Controls • Controls & Combability • Principles of Software Ergonomics
1420 – 1430	<b>Recap</b> 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

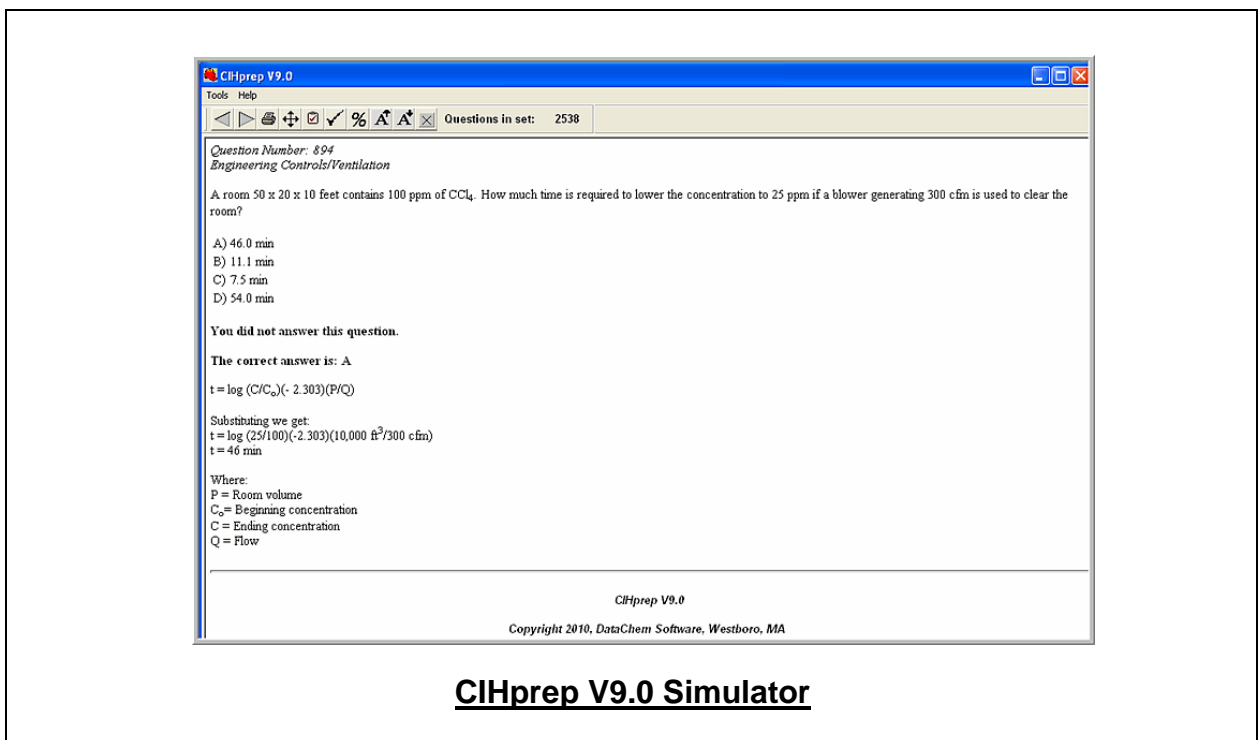
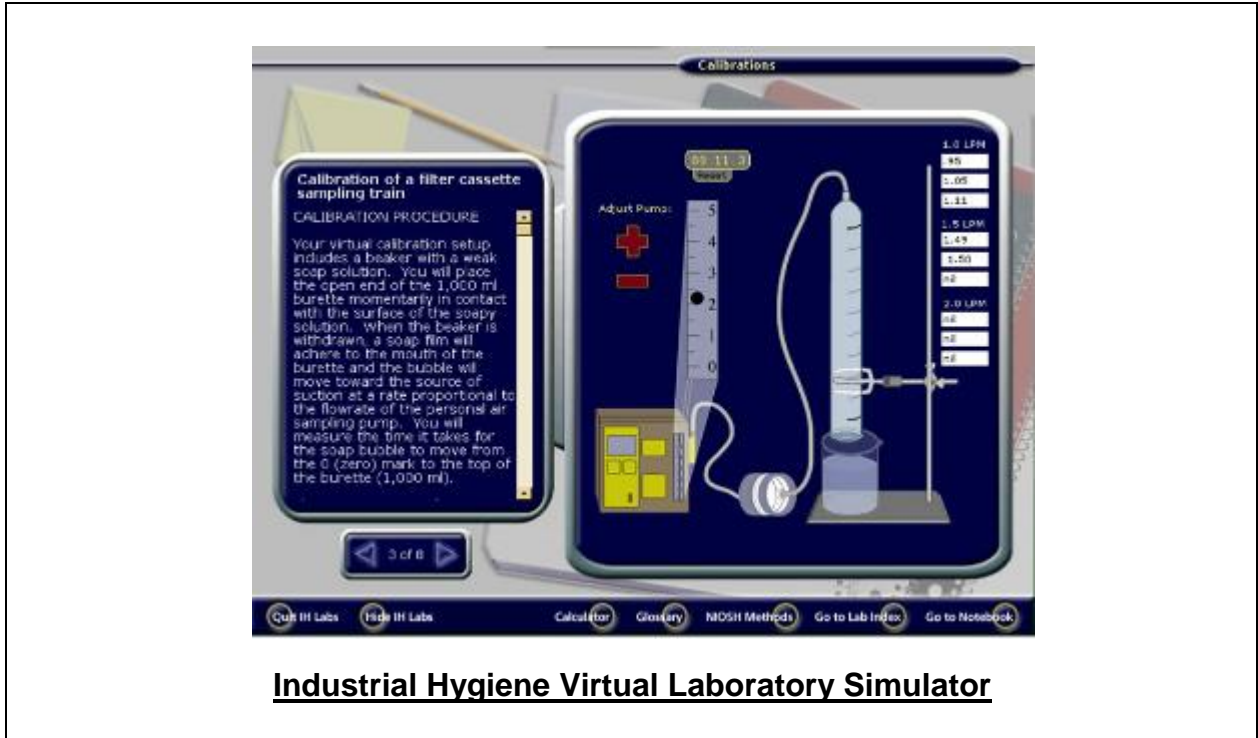
**Day 5: Thursday, 12<sup>th</sup> of December 2024**

0730 – 0930	<b>Vision &amp; Lighting</b> Structure of the Eye • Visual Acuity • Colour Vision • Vision in Low Light • Contrast Sensitivity • Glare • Reflections • Illuminance • Luminance • Luminaires • Lightning Design • Reducing Eye Strain
0930 – 0945	Break
0945 – 1030	<b>Vision &amp; Lighting (cont'd)</b> Noise • Structure of the Ear • Hearing Problems • Nuisance Noise • Measuring Noise • Typical Noise Levels • Controlling Noise • Thermal Environment • Factors Affecting the Thermal Environment
1030 – 1145	Break
1145 – 1200	<b>Vision &amp; Lighting (cont'd)</b> Impact of Heat Stress • Exposure to Heat • Exposure to Cold • Thermal Comfort Surveys • Vibration • Hand- Transmitted Vibration • Whole Body Vibration • Smell, Taste & Touch • Senses at Work • Smell & Taste • Skin & Touch
1200 – 1300	<b>Vision &amp; Lighting (cont'd)</b> Clothing & Personal Protective Equipment Ergonomics Considerations • Protective Clothing • Footwear • Gloves • Eye Protection & Head Protection • Hearing Protection • Risk Perception & PPE Use • Ergonomics Considerations with PPE Use • PPE Use
1300 – 1315	<b>Course Conclusion</b> Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1315 – 1415	<b>COMPETENCY EXAM</b>
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course



### 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” and “CIHprep V9.0 Simulator”.



### Course Coordinator

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