COURSE OVERVIEW HE1939
Industrial Hygiene Certification Program
BOHS-M504: Asbestos and Other Fibres

(Accredited by the British Occupational Hygiene Society - BOHS)

Course Title

Industrial Hygiene Certification Program: BOHS-M504: Asbestos and Other Fibres *(Accredited by the British Occupational Hygiene Society - BOHS)*

Course Date/Venue

November 23-27, 2025/Slaysel 02 Meeting Room, Movenpick Hotel & Resort Al Bida'a Kuwait, City of Kuwait

Course Reference

HE1939

Course Duration

Five days/3.7 CEUs/37 PDHs

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 aims to provide candidates with an enhancement of their knowledge of occupational hygiene practice in relation to fibrous dusts. The module concentrates on asbestos, but other fibres, e.g. Machine made mineral fibres, aramids, carbon etc., which are increasingly finding uses in industry are also covered.

The course will benefit those working in asbestos consultancy as well as in mainstream occupational hygiene, giving an understanding of the health risks associated with asbestos and other fibres as well as the means of evaluation and control.

This course will require at least 45 hours of study time, of which at least 37 hours will be taught (teaching and practical assessments) and 8 hours will be independent (in the candidates' own time).

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

- Describe the composition, nature and properties of asbestos, machine made mineral and other fibres and their historical uses
- Describe the health effects of asbestos and other fibrous materials and apply appropriate exposure limits
- Describe the uses of asbestos in buildings and the public health risk that these may pose
- Understand the principles of and requirements for asbestos surveys including taking samples and identifying bulk asbestos types by microscopic techniques including relevant safety requirements
- Be thoroughly familiar with current good practice in the construction and use of enclosures for asbestos remediation and the use of decontamination units
- Understand all the principles of clearance testing, the requirements for measurement and appropriate techniques for post remediation evaluation
- Conduct air sampling to determine airborne concentrations of asbestos or other fibres in accordance with defined procedures including microscopic counting techniques

This course is designed to provide participants with a detailed and up-to-date overview of Asbestos and Other Fibres. It covers the asbestos and its uses including the physical and chemical properties of other fibres like, mineral, wool, ceramic fibres, special purpose fibres and continuous filament fibre; the health effects of asbestos, inhalation studies, exposure limits for asbestos and machine made mineral and other fibres; the typical exposure to machine made mineral and other fibres and typical legislative approach; the types and uses of asbestos in buildings and surveys of asbestos containing materials in buildings and bulk sampling; the risk assessment and management of asbestos containing materials in buildings; and the asbestos remediation and assessment prior to reoccupation covering preparation, enclosures, remediation procedures and waste removal.

During this interactive course, participants will learn the various types, equipment and procedures of air sampling; the clearance sampling, setting-up microscope for fibre counting and filter preparation; examining the reliability of results in relation to quality control schemes and electron microscopy; the macroscopic examination and sample preparation; the polarised light microscopy, dispersion straining and health and safety precautions during identification; and the quality control and other types of fibres and other products which may interfere with asbestos identification.

Course Objectives

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

- Achieve the BOHS Certificate in BOHS-M504: Asbestos and Other Fibres
- Discuss asbestos and its uses including the physical and chemical properties of other fibres like, mineral, wool, ceramic fibres, special purpose fibres and continuous filament fibre
- Recognize the health effects of asbestos, inhalation studies, exposure limits for asbestos and machine made mineral and other fibres

- Identify the typical exposure to machine made mineral and other fibres and discuss typical legislative approach
- Recognize the types and uses of asbestos in buildings and apply surveys of asbestos containing materials in buildings and bulk sampling
- Conduct risk assessment of asbestos containing materials in buildings and management of asbestos containing materials in buildings
- Apply asbestos remediation and assessment prior to reoccupation covering preparation, enclosures, remediation procedures and waste removal
- Identify the various types of air sampling including air sampling equipment and procedures
- Carryout clearance sampling, set-up microscope for fibre counting and apply filter preparation
- Examine the reliability of results in relation to quality control schemes and discuss electron microscopy
- Carryout macroscopic examination and sample preparation as well as discuss polarised light microscopy, dispersion straining and health and safety precautions during identification
- Apply quality control and identify other types of fibres and other products which may interfere with asbestos identification

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 asbestos and other fibres for occupational health professionals, industrial hygienists, health and safety officers, regulatory compliance officers and environmental consultants.

Exam Eligibility & Structure

There are no prerequisites required for this qualification, however, those working in asbestos consultancy as well as in mainstream occupational hygiene will benefit from this course, which gives an understanding of the health risks associated with asbestos and other fibres as well as the means of evaluation and control.

Suggested References and Further Reading

(1) Asbestos for Surveyors
(2) Alternative Code of Practice 2 Surveying for Asbestos
(3) ACAD Alternative Code of Practice 1 for 'work with asbestos requiring a license'
(4) International Programme for Chemical Safety EHC53 Asbestos and other Fibres
(5) WHO fibre counting technique
(6) Asbestos and Man Made Fibres in Buildings, Practical Guidance.
(7) Asbestos: Effects on Health of Exposure to Asbestos

(8) The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure
(9) ISO 17025 (2005) General Requirements for the Competence of Testing and Calibration Laboratories
(10) ISO 17020 (2012) Requirements for the Operation of Various Types of Bodies Performing Inspection
(11) HSE Guidance Note HSG264 (2012) Asbestos: The Survey Guide
(12) HSE (UK) Guidance MDHS 59 (1988).
(13) Man Made Mineral Fibre Airborne Number Concentration by Phase Contrast Light Microscopy
(14) HSE (UK) Guidance HSG 248 (2005) Asbestos: The Analysts Guide for Sampling, Analysis and Clearance Procedures
(15) HSE Guidance Note HSG 210 (2012) Asbestos Essentials
(16) HSE Guidance INDG 223 (2012) Managing Asbestos in Buildings
(17) HSE ACOP (L143) (2006) Work with Materials Containing Asbestos
(18) HSE ACOP and Guidance L144 (2007s) Managing Health and Safety in Construction. Construction (Design and Management) Regulations 2007
(19) HSE ACOP (L127) (2006) Management of Asbestos in Non-Domestic Premises
(20) HSE Guidance Note HSG 227 (2002) Comprehensive Guide to Managing Asbestos in Premises

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 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$ 175 per Delegate + **VAT**

Accommodation

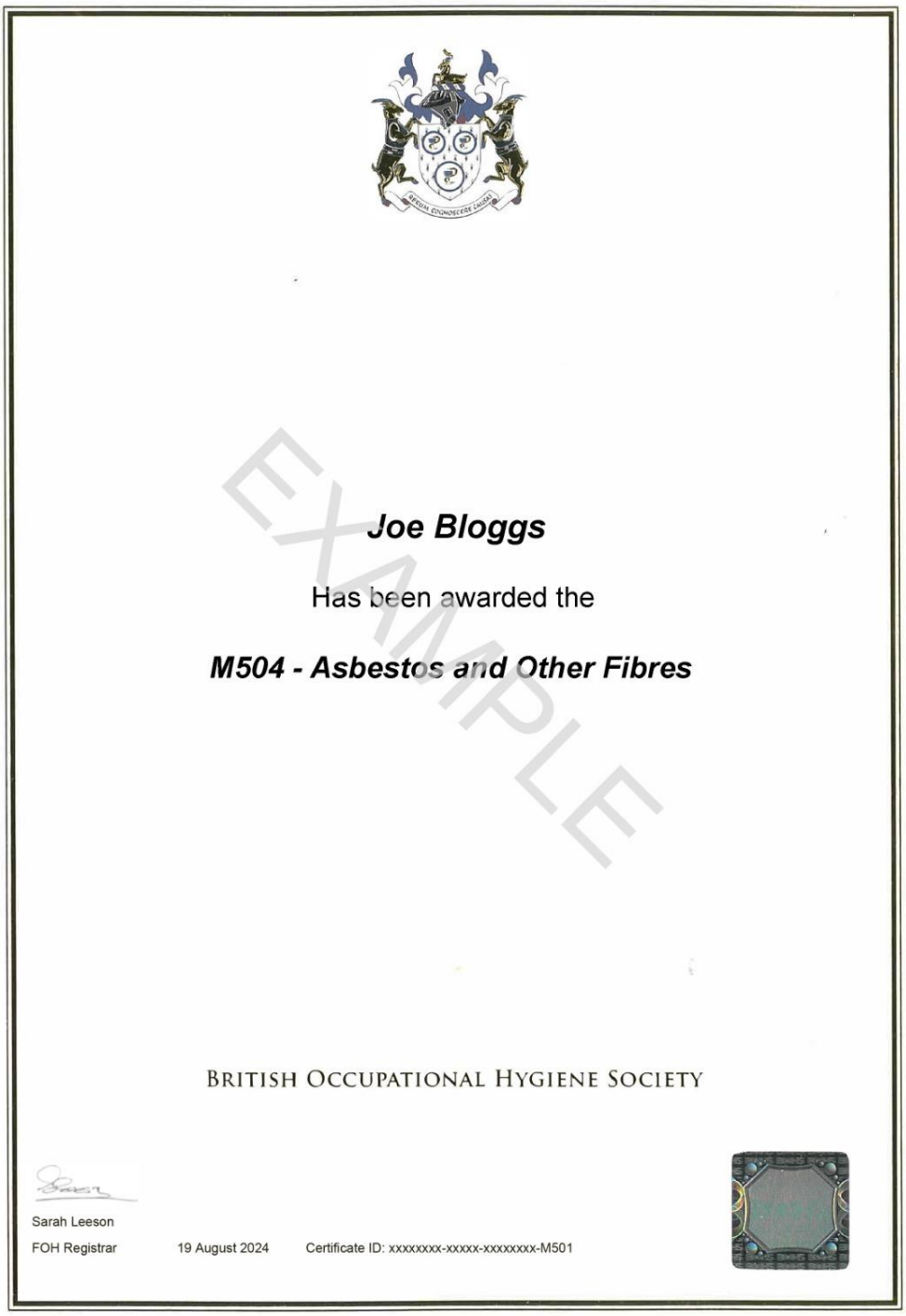
Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Certificate(s)

(1) BOHS-M504 – Asbestos and Other Fibres will be awarded to participants who have successfully completed the course and passed all the parts (A and B) within 12 months.

BOHS Certificate(s)

The following certificate is a sample of the BOHS 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 Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 15-Nov-23

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE1939	Industrial Hygiene Certification Program BOHS-M504: Asbestos and Other Fibres *(Accredited by the British Occupational Hygiene Society - BOHS)*	November 11-15, 2023	37	3.7

Total No. of CEU's Earned as of TOR Issuance Date **3.7**

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:-

- The British Occupational Hygiene Society (BOHS)

Haward Technology is an Approved Training Partner of the British Occupational Hygiene Society (BOHS) for the M201 and M500 series modules, which are designed to maintain a high standard of occupational hygiene education.

Together with BOHS, Haward Technology supports hygiene professionals in their mission to create safe working environments globally and is committed to advancing the practice of occupational hygiene to promote healthier workplaces worldwide.

- 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.

- 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 **3.7 CEUs** (Continuing Education Units) or **37 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 almost **25 years** of extensive experience within **Oil & Gas**, **Refinery** and **Petrochemical** industries. His wide experience covers in the areas of **OHTA Modules** (Measurement of Hazardous Substances, Thermal Environment, Noise Measurement & Its Effects, Asbestos & Other Fibers, Control of Hazardous Substances, Ergonomics Essentials, Health Effects of Hazardous Substances), Advanced **Industrial Hygiene**, **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 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: ***Sunday, 23rd of November 2025***

0730 – 0745	*Registration, Coffee, Welcome & Introduction*
0745 - 0800	***PRE-TEST***
0800 – 0930	***Asbestos & Other Fibrous Materials: Asbestos*** *Describe the Six Regulated Forms of Asbestos in Relation to the Serpentine and Amphibole Groups of Minerals • Discuss Their Characteristic Properties, such as Flexibility, Tensile Strength, Combustibility, Thermal Conductivity and Resistance to Chemical Attack • Describe the Effects of Thermal and Other Forms Degradation on Asbestos Minerals*
0930 – 0945	*Break*
0945 - 1100	***Asbestos & Other Fibrous Materials: Uses of Asbestos*** *Explain the Physical and Chemical Properties of Asbestos which have Determined the Use of it in Industry • Discuss the Three Types of Asbestos which have Found Significant Commercial Use (Amosite, Chrysotile and Crocidolite) and the Various Categories of Asbestos-Containing Materials • Describe the Use and Occurrence of the Other Types of Asbestos as Possible Contaminants in Other Minerals*
1100 - 1215	***Asbestos & Other Fibrous Materials: Man Made Mineral & Other Fibres*** *Describe the Physical and Chemical Properties of Other Fibres such as Mineral Wools, Ceramic Fibres, Special Purpose Fibres and Continuous Filament Fibres*
1215 - 1315	*Lunch*
1315 - 1400	***Health Effects of Asbestos: Health Effects of Asbestos*** *Describe the Full Range of Health Effects Ranging from the Benign (Pleural Plaques) to the Terminal (Mesothelioma) in the Light of Results from Epidemiological Studies Conducted on Asbestos Workers • Pay Particular Attention to the Report by Doll and Peto, 'Effects on Health of Exposure to Asbestos' (1985), that by Hodgson and Darnton 'the Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure' (2000) and IPCS EHC53 Asbestos and Other Fibres. Review Subsequent Influential Publications • Cover Dose Response Relationships, the Effects of Smoking Whilst Working with Asbestos and the Risks to Health from Low Level Exposure*
1400 - 1430	***Health Effects of Asbestos: Inhalation Studies*** *Review Research Studies of the Effects of Natural and Synthetic Fibres on Laboratory Animals, with Particular Attention to Inhalation Studies • Draw Attention to the Differences and Similarities Between the Results of Inhalation Studies on Laboratory Animals Subjected to Various Types of Fibres • Compare the Animal Experimental Evidence and that Derived from Known Human Experience*
1430 - 1500	***Health Effects of Asbestos: Exposure Limits etc. for Asbestos*** *Review Exposure Limits and the Clearance Indicator Threshold for Asbestos Together with the Philosophy Behind Setting Them*
1500 - 1515	*Break*
1515 - 1545	***Health Effects of Asbestos: Machine Made Mineral & Other Fibres*** *Describe the Health Effects of Machine Made Mineral and Other Fibres such as Skin, Eye, and Upper Respiratory Tract Irritation as well as Carcinogenic Effects • Review the IARC 2B Classification • Review Health Effects of Other Fibres including Aramids, Carbon etc*

1545 - 1620	***Health Effects of Asbestos: Typical Exposures to Machine Made Mineral & Other Fibres*** *Give Examples of Typical Exposures while Working with Machine Made Mineral and Other Fibres in Fibres/Ml and Explain what can be Achieved Under Good Working Conditions. Operations Discussed Should include Processes which Result in a Wide Range of Exposure Levels • Comment on the Relationship Between Mass Concentrations and Fibre Counts*
1620 - 1630	***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*
1630	*End of Day One*

Day 2: ***Monday, 24th of November 2025***

0730 - 0830	***Health Effects of Asbestos: Typical Legislative Approach*** *Discuss the WHO Guidelines and Documentation Relating to Elimination of Asbestos Related Diseases for Control of Asbestos Exposure • Discuss Legislative Approach with Particular Reference to Employer's Responsibilities for Reducing Risks • Review Literature and Typical Guidance Documentation*
0830 - 0930	***Asbestos in Buildings & Conducting: Types & Uses of Asbestos in Buildings*** *Use the Literature as a Primary Source of Information on Products & Their Locations in Buildings • Explain the Physical & Chemical Properties of Asbestos Which Have Determined the Use of It in Industry*
0930 – 0945	*Break*
0945 - 1130	***Asbestos in Buildings & Conducting: Types & Uses of Asbestos in Buildings (cont'd)*** *Discuss the Three Types of Asbestos Which Have Found Significant Commercial Use (Amosite, Chrysotile & Crocidolite) in Relation to Sprayed & Thermal Insulation, Insulating Boards, Coatings, Cement Products & Other Reinforced Products (Vinyl Tiles, Roofing Felts for Example) Commonly Used in Building Construction • Discuss the Uses & Composition of Other Asbestos Products Likely to Be Used or Found Inside Buildings on Plant, Machinery or Domestic Appliances (Textiles, Friction Materials, Seals, Gaskets etc)*
1130 - 1230	***Asbestos in Buildings & Conducting: Surveys of Asbestos Containing Materials in Buildings*** *Discuss the Types of Survey Which Can Be Conducted • Describe How to Plan, Organise & Conduct Surveys • Discuss Which Parameters Need to Be Assessed & Recorded During the Survey • Explain Reporting Standards, Typical Errors & How to Present Results in Meaningful Manner & Record Properly the Location of Asbestos Containing Materials*
1230 - 1330	*Lunch*
1330 - 1430	***Asbestos in Buildings & Conducting: Bulk Sampling*** *Discuss the Reasons for Bulk Sampling Ranging from the Collection of One Sample Through to a Complete Asbestos Audit of a Building to Compile an Asbestos Register • Describe the Techniques Used & Precautions Required When Collecting Bulk Samples*
1430 - 1445	*Break*

1445 - 1620	***Asbestos in Buildings & Conducting: Risk Assessment of Asbestos Containing Materials in Buildings*** *Examine Strategies for Risk Assessment of Asbestos Containing Materials in Buildings & the Compilation of Asbestos Registers • Outline the Types & Sources of Information Required & Discuss How This Information is Used*
1620 – 1630	***Recap*** *Using This Course Overview, the Instructor(S) Will Brief Participants About the Topics That were Discussed Today & Advise Them of the Topics to Be Discussed Tomorrow*
1630	*End of Day Two*

Day 3: ***Tuesday, 25th of November 2025***

0730 - 0930	***Asbestos in Buildings & Conducting: Management of Asbestos Containing Materials in Buildings*** *Examine Strategies for Management of Asbestos Containing Materials in Buildings & the Use of Asbestos Registers & Permit to Work Systems*
0930 - 0945	*Break*
0945 - 1045	***Asbestos in Buildings & Conducting: Management of Asbestos Containing Materials in Buildings (cont'd)*** *Outline the Types & Sources of Information Required & Discuss How This Information is Used • Describe the Decision-Making Protocols for Prioritizing Relevant Management Actions*
1045 – 1230	***Asbestos Remediation & Assessment Prior to Reoccupation: Preparation*** *Discuss the Steps Required in a Job Specification, Preparation of a Plan of Work by the Contractor, Tender Evaluation & the Various Roles Required for Proper Management of the Site • Include Other Health & Safety Aspects such as Emergency Procedures*
1230 – 1330	*Lunch*
1330 – 1430	***Asbestos Remediation & Assessment Prior to Reoccupation: Enclosures*** *Correct Principles of Construction & Implementation of an Enclosure for Asbestos Remediation • Methods of Enclosure Examination & the Documentation Associated with the Enclosure • Correct Procedures for Entry, Exit & Decontamination • The Use of Negative Pressure Monitors • Use of Secondary Enclosures*
1430 – 1445	*Break*
1445 – 1620	***Asbestos Remediation & Assessment Prior to Reoccupation: Remediation Procedures*** *Describe the Various Control Measures Available to a Removal Company to Ensure That Asbestos Dust Levels are Kept as Low as is Reasonably Practicable Inside the Enclosure*
1620 – 1630	***Recap*** *Using This Course Overview, the Instructor(S) Will Brief Participants About the Topics That were Discussed Today & Advise Them of the Topics to Be Discussed Tomorrow*
1630	*End of Day Three*

Day 4: **Wednesday, 26th of November 2025**

0730 - 0930	***Asbestos Remediation & Assessment Prior to Reoccupation: Waste Removal*** *Describe the Requirements for Removal, Storage & Disposal of Waste from an Enclosure • Role of Analyst • Describe the Role of the Analyst as a Competent Person/Consultant • Understand the Requirements for Quality Management Systems in Accordance with ISO17025 & Accreditation with National Bodies • Air Monitoring & Other Techniques • Identify the Various Stages where Air Monitoring Should Be Employed Both During & Post Remediation*
0930 – 0945	*Break*
0945 - 1045	***Asbestos Remediation & Assessment Prior to Reoccupation: Waste Removal (cont'd)*** *Discuss Other Inspection Techniques such as the Dust Lamp, Smoke Tubes, Negative Pressure Monitors Which are Also Useful for Checking of the Effectiveness of the Work & the Control Measures • Certification of Reoccupation • Demonstrate All the Essential Requirements of the Required Clearance Procedures on Completion of Asbestos Remediation Work including the Decontamination Unit. This Must Include the Certification for Reoccupation*
1045 - 1130	***Air Sampling & Fibre Counting: Types of Air Sampling*** *Detail the Types of Air Sampling that can be Conducted • Examine the Sampling Requirements & Their Relevance for Identification of Sources of Contamination • Cover Assessment of Personal Exposure & the Checking of Efficiency & Effectiveness of Control Measures*
1130 - 1230	***Air Sampling & Fibre Counting: Air Sampling Equipment & Procedures*** *Discuss the Requirements of the World Health Organisation Method in Relation to Sampling of Airborne Asbestos & Other Fibrous Materials • Demonstrate the Equipment Required & the Adjustment, Measurement & Calibration of Sampling Rate • Discuss the Requirements for Recording Calibration & Site Sampling Information etc*
1230 - 1330	*Lunch*
1330 - 1400	***Air Sampling & Fibre Counting: Clearance Sampling*** *Discuss When & How Clearance Sampling is Conducted, What Should Be Looked for & the Types & Frequency of Disturbance Which Must Take Place*
1400 - 1500	***Air Sampling & Fibre Counting: Setting Up Microscopes for Fibre Counting*** *Describe Use of Light Microscopy, Setting Up of Koehler Illumination, Calibration of Stage Micrometer, Test Slides • Describe the Theory of Phase Contrast Microscopy, with Particular Attention to the Microscope Specifications Outlined in Guidance Material • Demonstrate & Allow Students to Practice the Use of the Walton Beckett Graticule, Stage Micrometer & NPL Test Slide or Equivalent. (Candidates Should Be Given the Opportunity to Set Up Various Makes of Microscope Used in This Work as Well as to Count Slides of Known Quality)*
1500 – 1515	*Break*
1515 - 1620	***Air Sampling & Fibre Counting: Filter Preparation*** *Make Students Familiar with the Preparation of Filters & Counting of Fibres in Accordance with the WHO Method • Discuss the Limitations of the Methods Together with Examination of Accuracy, Precision & Systematic Differences*
1620 - 1630	***Recap*** *Using This Course Overview, the Instructor(S) Will Brief Participants About the Topics That were Discussed Today & Advise Them of the Topics to Be Discussed Tomorrow*
1630	*End of Day Four*

Day 5: **Thursday, 27th of November 2025**

0730 - 0930	***Air Sampling & Fibre Counting: Calculation of Results & Quality Control*** *Examine the Reliability of Results in Relation to Quality Control Schemes*
0930 – 0945	*Break*
0945 - 1045	***Air Sampling & Fibre Counting: Electron Microscopy*** *Give an Outline of the Basic Principles of SEM & TEM • Discuss the Discrimination Between Asbestos Types & Other Fibres Using SEM & TEM Together with Energy Dispersive X-Ray Analysis (EDXA)*
1045 - 1115	***Analysis of Bulk Samples: Macroscopic Examination*** *Demonstrate Examination by Low Power Stereo Microscope, including the Recognition of the Basic Physical Properties of the Main Asbestos Types i.e. Colour, Lustre, Elasticity, Tenacity, Morphology & Behaviour in Water*
1115 - 1200	***Analysis of Bulk Samples: Sample Preparation*** *Explain & Demonstrate the Options for Sample Preparation to Segregate the Asbestos for Analysis • Demonstrate Sample Preparation Methods to Remove Matrix Materials Before Polarised Light Microscopic Identification including Acid Washing, Solvent Extraction & Combustion*
1200 - 1230	***Analysis of Bulk Samples: Polarised Light Microscopy*** *Examine Using Polarized Light Microscopy Characteristics such as Morphology, Colour, Pleochroism, Birefringence (Interference Colours), Sign of Elongation & Extinction of Different Asbestos Types*
1230 - 1330	*Lunch*
1330 - 1400	***Analysis of Bulk Samples: Dispersion Staining*** *Describe & Demonstrate Dispersion Stain Microscopy Using Refractive Index Liquids Together with a Mccrone Dispersion Staining Objective or Phase Contrast Microscopy with Polariser in Relation to the Assessment of Refractive Indices of Asbestos & Other Fibres*
1400 - 1430	***Analysis of Bulk Samples: Health & Safety Precautions During Identification*** *Discuss the Precautions Required When Working with Asbestos & Other Fibres e.g. the Use of Glove Boxes & Ventilated Cabinets as Well as the Required Precautions When Using Acids During Sample Preparation & When Handling R.I. Liquids*
1430 - 1500	***Analysis of Bulk Samples: Quality Control*** *Discuss Quality Control Procedures, Likely Detection Limits, Problems Contamination During Sampling & Analysis, Together with the Handling of Homo Heterogeneous Samples*
1500 - 1515	*Break*
1515 - 1545	***Analysis of Bulk Samples: Interfering Fibres & Products*** *Describe Other Types of Fibres & Other Products Which May Interfere with Asbestos Identification e.g. Leather Swarf, Skin Cells, Polyethylene • Cover Problems with Products such as Floor Tiles • Describe the Effects of Heat on Asbestos Fibres*
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 30 days following the course completion. Each participant has only one trial for the MOCK exam within this 30-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.

Examinations & Assessment

Candidates are required to pass all of the following parts (A and B below) to be awarded this qualification.

(A) Practical Assessment

The practical assessment will be conducted by the Tutor during relevant parts of the course for all candidates. This is to ensure that every candidate can demonstrate their individual ability and correct method.

The exercises will involve:

- Set up and use of an air sampling system for asbestos fibres in air with suitable high-volume pump and the subsequent preparation of slides for counting
- Sampling of bulk material for asbestos identification including all the required safety precautions. (Surrogate materials to be used)

Full details of the practical requirements and individual candidate reporting can be found in the Practical Evaluation Report which is available from www.bohs.org

(B) Written Examination

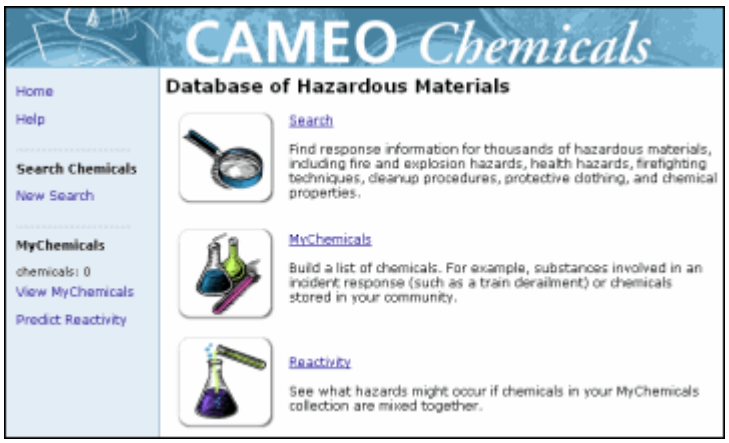
This is an open-book examination comprising of 40 (160 marks) short-answer questions illustrated by photographs and diagrams as appropriate to be answered in 2 hours. Each question is worth 4 marks.

The examination covers all sections of the syllabus and is overseen by an invigilator.

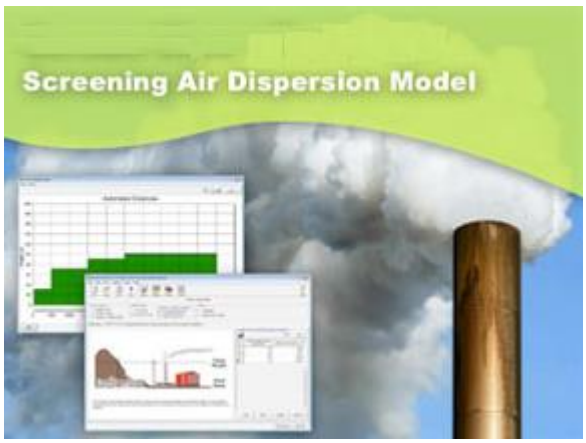
The pass mark for this examination is 50 %

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 the Environmental simulators "CAMEO Chemicals Suite Software", "US EPA SCREEN3 Model", "AERSCREEN Model", "Industrial Hygiene Virtual Laboratory Simulator" and "CIHprep V9.0 Simulator".



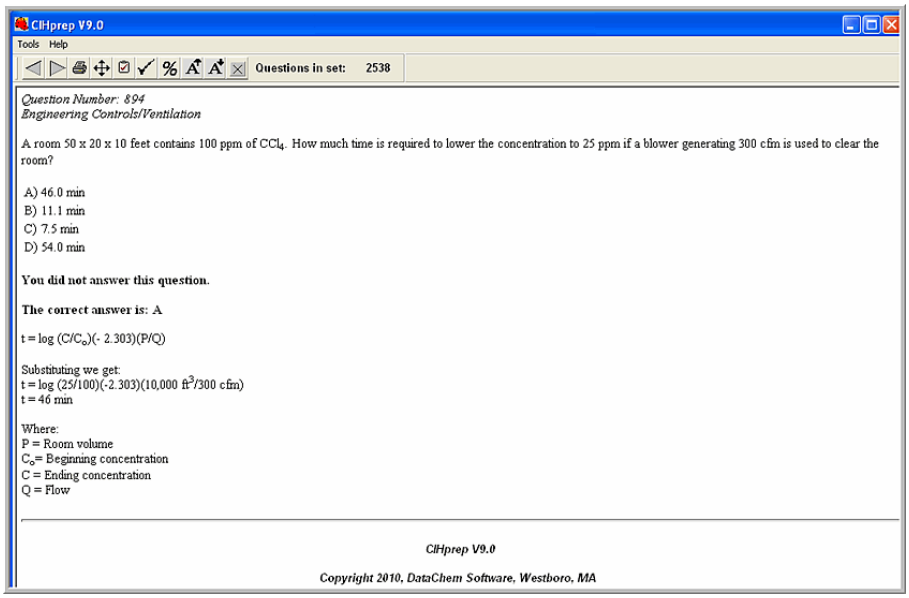
CAMEO Chemicals Suite Software



US EPA SCREEN3 Model

AERSCREEN Model

Industrial Hygiene Virtual Laboratory Simulator



CIHprep V9.0 Simulator

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