COURSE OVERVIEW LE0098-3D
ISO/IEC 17025:2017 Laboratory Management System Implementation

Course Title
ISO/IEC 17025:2017 Laboratory Management System Implementation



Course Date/Venue
Session 4: December 07-09, 2026/Executive Boardroom A, Intercontinental Abu Dhabi Hotel, Abu Dhabi, UAE



Course Reference
LE0098-3D

Course Duration/Credits
Three days/1.8 CEUs/18 PDHs

Course Description







This includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with the knowledge, practical skills and systematic approach required to establish, implement, maintain and continually improve a laboratory management system (LMS) in accordance with ISO/IEC 17025:2017 — *general requirements for the competence of testing and calibration laboratories*. It focuses on the technical, managerial, operational and quality assurance requirements necessary to demonstrate laboratory competence, impartiality, consistency and reliability of testing and calibration results.

Further, the course will also discuss the fundamental principles of ISO/IEC 17025:2017 for testing and calibration laboratories; the general requirements - impartiality and confidentiality and structural requirements and laboratory organization; the personnel competence, training and authorization; the laboratory facilities and environmental conditions, laboratory equipment management and maintenance; the metrological traceability and external providers and reviewing requests, tenders and contracts; and the proper selection, verification and validation of laboratory methods.

During this interactive course, participants will learn the sampling procedures and handling of laboratory items; the technical records and measurement uncertainty; ensuring the validity of results and laboratory quality control; reporting results and laboratory information management; the laboratory management system documentation and records control; the risk-based thinking, complaints and nonconforming work; the corrective actions and continual improvement, internal auditing and management review; and the ISO/IEC 17025:2017 implementation strategy.

Course Objectives/Outcomes & Benefits for the Participants

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

- Apply and gain an in-depth knowledge on ISO/IEC 17025: 2017 laboratory management systems implementation
- Discuss the fundamental principles of ISO/IEC 17025:2017 for testing and calibration laboratories
- Identify the general requirements - impartiality and confidentiality and structural requirements and laboratory organization
- Explain personnel competence, training and authorization and recognize laboratory facilities and environmental conditions
- Carryout laboratory equipment management and maintenance and discuss metrological traceability and external providers
- Review requests, tenders and contracts as well as select, verify and validate laboratory methods
- Employ sampling procedures and handling of laboratory items and discuss technical records and measurement uncertainty
- Ensure the validity of results and laboratory quality control and report results and laboratory information management
- Apply laboratory management system documentation and records control and interpret risk-based thinking, complaints and nonconforming work
- Implement corrective actions and continual improvement, internal auditing and management review as well as ISO/IEC 17025:2017 implementation strategy

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 ISO/IEC 17025: 2017 laboratory management systems implementation for laboratory managers, laboratory supervisors, quality managers, quality assurance and quality control personnel, laboratory technicians, calibration engineers, testing engineers, technical managers, internal auditors, laboratory management system coordinators, and professionals responsible for implementing or maintaining ISO/IEC 17025:2017 requirements.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **1.8 CEUs** (Continuing Education Units) or **18 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. Pete Du Plessis is a **Professional Quality Management Consultant** with over **25 years** of extensive experience. His expertise lies extensively in the areas of **Laboratory Quality Management** (**ISO17025**), **Modern Laboratory Management**, **Laboratory Information Management System** (**LIMS**), **Laboratory Quality** Management, **Data & Method** Validation, Requirements, **Master Data** Management, **Analytical Data** Integrity, Project Management, Human Resource Management, Financial Management, Advance Planning & Budgeting Control, Document Management, Record Management, Contract Management, Negotiation Management, Risk Management, Leadership & Business Management, Production & Inventory Management, Warehousing, Purchasing & Marketing Management, Work Engineering & Advanced Production Techniques, Production Logistics, Supply Chain Management, Fleet Management, Stores & Stock Control, Human Resources & Industrial Relations Management, Quality Assurance & Control, Operations Management, Project Management, and Strategic Planning & Management. Previously, he was the **Quality Manager** of **Benteler Automotive**, where he was responsible for **implementing**, **controlling** and **managing quality** and technical department processes and systems and mobilizing the quality control department, procedures and **quality management system**.

During his career life, Mr. Plessis has worked with several prestigious companies occupying numerous challenging managerial and technical positions such as being the **Financial Manager**, **Operations Manager**, **Technical & Quality Manager**, **Logistics & Purchasing Manager**, **Head Metrologist**, **Quality Engineer**, **Project Engineer**, **Materials & Warehouse Planner & Controller**, **Quality Control Inspector**, **Consultant**, **Fitter & Machinist**, **Apprentice Fitter** and **Part-time Instructor**.. All throughout his career, he has mastered and specialized in the application of project management, warehouse & inventory control, value chain analysis, logistics & strategic planning, process flow analysis, business process evaluation & re-engineering, master-plan development, capacity planning and site space-planning & development.

Mr. Plessis has **Bachelor** degree with **Honours** in **Industrial Engineering** & **Management**. Further, he has gained **Diploma** in **Quality & Production Management**. He is also a **Certified Assessor** & **Moderator** with the Manufacturing, Engineering & Related Services Education and Training Authority (MERSETA), a **Certified Trainer/Assessor** by the **Institute of Leadership & Management** (**ILM**) and a **Certified Instructor/Trainer** by the APICS. He has further delivered numerous trainings, courses, seminars, conferences and workshops internationally.

Course Fee

US$ 3,750 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.

Training Methodology

Our courses employ an interactive, learner-centred methodology that integrates theoretical knowledge with practical application. The training is delivered through a suitable combination of some or all of the following methods, selected according to the course content and learning objectives:

- Instructor-led presentations and facilitated discussions
- Practical workshops and participant presentations
- Hands-on exercises and real-world case studies
- Equipment demonstrations and technical drawings
- Hardware- and software-based simulations
- Gamification & Role Play in soft-skills courses only
- Virtual Reality (VR) and Augmented Reality (AR)
- Instructional videos and other relevant training resources

This blended approach encourages active participation, strengthens practical skills and supports the effective application of acquired knowledge in the workplace.

Learning Design & Customization

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Monday, 07th of December 2026***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to ISO/IEC 17025:2017 & Laboratory Management Systems*** *Overview, Purpose, Scope, and Fundamental Principles of ISO/IEC 17025:2017 for Testing and Calibration Laboratories • Structure and Interpretation of ISO/IEC 17025:2017 Requirements, Including Clauses 4 through 8 • Differences between Laboratory Accreditation, Management System Certification, and Regulatory Compliance • Benefits of Implementing ISO/IEC 17025:2017 in Improving Laboratory Competence, Reliability, Consistency, and Customer Confidence*
0930 – 0945	*Break*
0945 – 1030	***General Requirements – Impartiality & Confidentiality (Clause 4)*** *Understanding Impartiality Requirements and Identifying Potential Conflicts of Interest in Laboratory Activities • Establishing Policies and Procedures to Safeguard Laboratory Independence, Objectivity, and Integrity • Identifying and Managing Risks to Impartiality Arising from Commercial, Financial, Organizational, or Personnel Relationships • Implementing Confidentiality Controls to Protect Customer Information, Laboratory Data, Test Results, and Proprietary Information*

1030 – 1130	***Structural Requirements & Laboratory Organization (Clause 5)*** *Establishing the Legal Identity, Organizational Structure, and Management Responsibilities of the Laboratory • Defining Laboratory Activities, Scope of Operations, Authority, Accountability, and Reporting Relationships • Assigning Responsibilities for Implementing, Maintaining, and Improving the Laboratory Management System • Establishing Effective Communication, Organizational Controls, and Management Oversight to Ensure Laboratory Conformity*
1130 – 1215	***Personnel Competence, Training & Authorization (Clause 6.2)*** *Identifying Competency Requirements for Laboratory Personnel Involved in Testing, Calibration, Sampling, and Technical Evaluation • Developing Personnel Qualification Criteria, Competency Matrices, Job Descriptions, and Training Requirements • Establishing Procedures for Personnel Selection, Training, Supervision, Competency Assessment, and Ongoing Performance Monitoring • Implementing Personnel Authorization Systems and Maintaining Documented Records of Competence, Training, and Technical Responsibilities*
1215 – 1230	*Break*
1230 – 1330	***Laboratory Facilities & Environmental Conditions (Clause 6.3)*** *Identifying Laboratory Facility Requirements and Environmental Conditions That Influence Testing and Calibration Validity • Establishing Environmental Monitoring and Control Procedures for Temperature, Humidity, Vibration, Contamination, and Other Relevant Parameters • Implementing Laboratory Housekeeping, Access Control, Contamination Prevention, and Segregation of Incompatible Activities • Maintaining Environmental Monitoring Records and Evaluating the Impact of Unsuitable Conditions on Laboratory Results*
1330 – 1400	***Laboratory Equipment Management & Maintenance (Clause 6.4)*** *Establishing Equipment Selection, Procurement, Identification, Installation, Commissioning, and Acceptance Procedures • Developing Equipment Calibration, Preventive Maintenance, Intermediate Checks, and Performance Verification Schedules • Implementing Equipment Status Identification, Calibration Labeling, Handling, Storage, and Protection against Unauthorized Adjustments • Maintaining Equipment Histories, Calibration Records, Maintenance Documentation, and Procedures for Handling Defective or Out-of-Tolerance Equipment*
1400 - 1420	***Practical Activities*** *Conduct a Preliminary ISO/IEC 17025:2017 Gap Assessment, Develop a Laboratory Organizational Responsibility Matrix, Prepare a Personnel Competency Matrix, and Establish an Equipment Calibration and Maintenance Register*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2: Tuesday, 08th of December 2026

0730 – 0830	***Metrological Traceability & External Providers (Clauses 6.5 & 6.6)*** *Understanding Metrological Traceability Principles, Measurement Standards, Calibration Hierarchies, and Traceability to the International System of Units (SI) • Establishing Traceability Chains through Competent Calibration Laboratories, Certified Reference Materials, and Recognized Measurement Standards • Developing Procedures for Evaluating, Selecting, Approving, and Monitoring External Calibration Providers, Suppliers, and Subcontracted Laboratory Services • Maintaining Calibration Certificates, Reference Material Records, Supplier Evaluations, and Documented Evidence of Metrological Traceability*
0830 – 0930	***Review of Requests, Tenders & Contracts (Clause 7.1)*** *Establishing Procedures for Reviewing Customer Requests, Technical Specifications, Testing Requirements, and Calibration Contracts • Evaluating Laboratory Technical Capabilities, Available Resources, Personnel Competence, and Equipment Suitability before Accepting Laboratory Work • Identifying Applicable Testing Methods, Customer Requirements, Decision Rules, and Externally Provided Laboratory Activities • Managing Contract Amendments, Customer Communications, Deviations from Agreed Requirements, and Documentation of Contract Reviews*
0930 – 0945	*Break*
0945 – 1100	***Selection, Verification & Validation of Laboratory Methods (Clause 7.2)*** *Establishing Criteria for Selecting Appropriate Standard Methods, Non-Standard Methods, Laboratory-Developed Methods, and Customer-Specified Procedures • Conducting Method Verification to Demonstrate Laboratory Capability to Perform Standardized Testing and Calibration Methods • Performing Method Validation Using Relevant Performance Characteristics, Including Accuracy, Precision, Selectivity, Detection Limits, Linearity, and Working Range • Developing Method Validation Protocols, Acceptance Criteria, Technical Evaluation Reports, and Records Demonstrating Method Suitability for Intended Applications*
1100 – 1215	***Sampling Procedures & Handling of Laboratory Items (Clauses 7.3 & 7.4)*** *Developing Sampling Plans, Sampling Methods, Representative Sampling Techniques, and Statistical Approaches to Sample Selection • Establishing Sample Identification, Collection, Transportation, Receipt, Registration, and Chain-of-Custody Procedures • Implementing Appropriate Sample Storage, Preservation, Handling, Protection, and Disposal Requirements to Maintain Sample Integrity • Managing Sample Abnormalities, Deviations, Environmental Influences, Customer Instructions, and Traceability Records throughout the Laboratory Workflow*
1215 – 1230	*Break*
1230 – 1330	***Technical Records & Measurement Uncertainty (Clauses 7.5 & 7.6)*** *Establishing Comprehensive Technical Records Covering Laboratory Observations, Raw Data, Calculations, Instrument Readings, Personnel Identification, and Testing Conditions • Understanding Measurement Uncertainty Concepts, Sources of Uncertainty, Systematic and Random Effects, and Uncertainty Contributions • Developing Measurement Uncertainty Budgets Using Appropriate Statistical Methods, Type A and Type B Evaluations, and Uncertainty Propagation Techniques • Calculating Combined and Expanded Measurement Uncertainty, Selecting Coverage Factors, and Documenting Uncertainty Estimates for Testing and Calibration Activities*

1330 – 1400	***Ensuring the Validity of Results & Laboratory Quality Control (Clause 7.7)*** *Establishing Quality Control Procedures Using Reference Materials, Control Samples, Blanks, Duplicate Analyses, Replicate Testing, and Intermediate Equipment Checks • Applying Statistical Quality Control Techniques, Control Charts, Trend Analysis, and Acceptance Criteria to Monitor Laboratory Performance • Participating in Proficiency Testing Programs and Interlaboratory Comparisons to Demonstrate Technical Competence and Result Comparability • Evaluating Quality Control Failures, Investigating Unexpected Results, Implementing Appropriate Actions, and Maintaining Documented Evidence of Result Validity*
1400 - 1420	***Practical Activities*** *Develop a Metrological Traceability Chart, Prepare a Method Verification or Validation Plan, Construct a Sample Measurement Uncertainty Budget, and Interpret Laboratory Quality Control Results Using Practical Examples*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3: ***Wednesday, 09th of December 2026***

0730 – 0830	***Reporting of Results & Laboratory Information Management (Clauses 7.8 & 7.11)*** *Establishing Requirements for Accurate, Clear, Objective, and Technically Valid Test Reports, Calibration Certificates, and Sampling Reports • Preparing Laboratory Reports Incorporating Measurement Results, Measurement Uncertainty Where Required, Decision Rules, Statements of Conformity, and Authorized Technical Interpretations • Implementing Laboratory Information Management Systems (LIMS), Electronic Data Management, Data Integrity Controls, and Information Security Procedures • Establishing Controls for Data Entry, Calculations, Software Validation, Report Authorization, Electronic Record Protection, and Amendments to Issued Laboratory Reports*
0830 – 0930	***Laboratory Management System Documentation & Records Control (Clauses 8.1–8.4)*** *Understanding Management System Implementation Options A and B and Their Relationship to ISO 9001-Based Quality Management Systems • Developing Laboratory Quality Policies, Measurable Quality Objectives, Management System Documentation, and Supporting Operational Procedures • Establishing Document Control Procedures Covering Preparation, Review, Approval, Revision, Distribution, Accessibility, and Withdrawal of Obsolete Documents • Implementing Record Identification, Storage, Protection, Retrieval, Retention, Disposal, and Electronic Records Management Procedures*

0930 – 0945	*Break*
0945 – 1100	***Risk-Based Thinking, Complaints & Nonconforming Work (Clauses 7.9, 7.10 & 8.5)*** *Identifying Operational, Technical, Organizational, and Quality-Related Risks and Opportunities Affecting Laboratory Competence and the Validity of Results • Applying Risk Assessment Techniques, Including Risk Matrices, Likelihood and Consequence Evaluations, and Failure Mode and Effects Analysis (FMEA), Where Appropriate • Establishing Procedures for Receiving, Evaluating, Investigating, Resolving, and Documenting Customer Complaints While Maintaining Impartiality • Managing Nonconforming Laboratory Work through Identification, Containment, Impact Assessment, Disposition, Customer Notification Where Necessary, and Authorization to Resume Activities*
1100 – 1230	***Corrective Actions & Continual Improvement (Clauses 8.6 & 8.7)*** *Establishing Processes for Identifying Improvement Opportunities through Laboratory Performance Monitoring, Customer Feedback, Quality Control Results, and Management Evaluations • Applying Root Cause Analysis Techniques, Including the 5 Whys, Fishbone Diagrams, and Structured Problem-Solving Methodologies • Developing Corrective Action Plans That Address Identified Causes, Assign Responsibilities, Establish Completion Deadlines, and Prevent Recurrence • Evaluating Corrective Action Effectiveness, Updating Relevant Risks and Management System Documentation, and Monitoring Continual Improvement Performance Indicators*
1230 – 1245	*Break*
1245 – 1300	***Internal Auditing & Management Review (Clauses 8.8 & 8.9)*** *Developing Risk-Informed Internal Audit Programs, Audit Schedules, Audit Scopes, Criteria, and Checklists Covering ISO/IEC 17025:2017 Requirements • Conducting Internal Audits through Document Reviews, Personnel Interviews, Laboratory Observations, Technical Record Examinations, and Objective Evidence Collection • Identifying and Documenting Audit Findings, Evaluating Nonconformities, Preparing Audit Reports, and Verifying Completion and Effectiveness of Corrective Actions • Conducting Management Reviews Covering Laboratory Performance, Audit Outcomes, Risks and Opportunities, Resource Adequacy, Customer Feedback, Quality Objectives, and Improvement Decisions*
1300 - 1330	***ISO/IEC 17025:2017 Implementation Strategy & Accreditation Preparation*** *Conducting a Comprehensive Laboratory Gap Analysis to Identify Existing Practices, Compliance Deficiencies, Documentation Requirements, and Implementation Priorities • Developing a Structured ISO/IEC 17025:2017 Implementation Plan Covering Responsibilities, Resources, Milestones, Training, Document Development, and Performance Monitoring • Preparing for Accreditation Assessments through Scope Definition, Evidence Compilation, Internal Audit Completion, Management Review, and Technical Competence Demonstrations • Managing Accreditation Assessment Findings, Implementing Corrective Actions, Maintaining Accreditation Readiness, and Establishing Long-Term Management System Sustainability*

1330 - 1345	***Practical Activities*** *Prepare an Internal Audit Checklist, Analyze Laboratory Nonconformity Case Studies, Conduct a Simulated Management Review, and Develop a Laboratory-Specific ISO/IEC 17025:2017 Implementation and Accreditation Readiness Action Plan*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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