COURSE OVERVIEW LE0558
Laboratory Quality Risk Management Tools & Techniques

Course Title
Laboratory Quality Risk Management Tools & Techniques

Course Date/Venue
September 21-25, 2025/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai UAE

Course Reference
LE0558

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course 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 a detailed and up-to-date overview of laboratory quality risk management. It covers the quality risk management (QRM) and its key elements; the international standards related to risk management in accordance with ISO 31000 and ISO 17025 standards; the various methods to identify risks and opportunities in analytical laboratory covering SWOT analysis, plan, identify, assess, handle and report; and the checklist for what-if analysis, known threats and hazards.

Further, the course will also discuss the Delphi technique, structured or semi-structured interviews, failure mode and effect analysis (FMEA) and fault tree analysis (FTA); the hazard and operability analysis (HAZOP), scenario analysis and Ishikawa analysis (fishbone); evaluating the risk; the event tree analysis (ETA), risk- quantitative assessment and likelihood matrix (risk matrix or heat map); the risks and opportunities using pareto charts; and managing the risk in the laboratory.

During this interactive course participants will learn the types of risks in the analytical laboratory, auditing risk and nonconforming work procedure; the quality risk assessment tools; controlling and mitigating strategies and integrating QRM in the organization; the critical success factors to consider when setting up or evaluating a quality risk management program including the importance of management support and suggestions for early risk assessment projects; and the key things to include in writing a procedure for risk assessment and management.

Course Objectives

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

- Apply and gain an in-depth knowledge on laboratory quality risk management
- Discuss the quality risk management (QRM) and its key elements
- Explain the international standards related to risk management in accordance with ISO 31000 and ISO 17025 standards
- Carryout various methods to identify risks and opportunities in analytical laboratory covering SWOT analysis, plan, identify, assess, handle and report
- Review checklist for what-if analysis, known threats and hazards
- Apply Delphi technique, structured or semi-structured interviews and failure mode and effect analysis (FMEA) and fault tree analysis (FTA)
- Employ hazard and operability analysis (HAZOP), scenario analysis and Ishikawa analysis (fishbone)
- Evaluate the risk and apply event tree analysis (ETA), quantitative assessment and likelihood matrix (risk matrix or heat map)
- Rank the risks and opportunities using Pareto charts as well as manage the risk in the laboratory
- Identify the types of risks in the analytical laboratory, audit risk and apply nonconforming work procedure
- Apply quality risk assessment tools, control and mitigate strategies and integrate QRM in the organization
- Identify critical success factors to consider when setting up or evaluating a quality risk management program including the importance of management support and suggestions for early risk assessment projects
- Recognize the key things to include in writing a procedure for risk assessment and management

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 laboratory quality risk management for those in management, quality, development, compliance, laboratory operations, and other technical areas.

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

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**. 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 **3.0 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.

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. Paul Patsi, MSc, BSc, is a **Senior Analytical Chemist** and an **International Expert** in **Water & Waste Water Treatment Technology** with over **25 years** of extensive experience in **Analytical Laboratory** and **Water & Wastewater Treatment Engineering**. His expertise covers **Laboratory Assessment**, **Microbiological Quality Assurance**, **Analytical Chemistry**, **Statistical Analysis**, **Laboratory Safety**, **Equipment & Infrastructure Management**, **Budgeting & Planning of Laboratory Consumables**, **Business Administration**, **Personnel Management**, **Laboratory Management**, **Chemical Analysis**, **Laboratory Auditing**, **Risk Assessment**, **Microbiological Analysis of Water & Waste Water**, **Waste Water Treatment Analysis**, **Water Chemistry**, **HACCP**, **ISO 22000**, **ISO 17025**, **ISO 9001**, Good Manufacturing Practice (**GMP**), Good Hygiene Practice (**GHP**) and Good Laboratory Practice (**GLP**). He is also an expert in microbiological indoor air quality, water biology, food sampling and calibration. He is currently the **Head of Industrial Analytical Laboratory** of PINDOS wherein he is in-charge of the budgeting, auditing, consumables, suppliers, personnel management, equipment and infrastructure management along with waste water treatment and water/environmental legislation.

During his career life, Mr. Paul has held key positions such as the **Head of Microbiology & Chemical Laboratory**, **Head of Quality Control**, **Technical Consultant**, **Research Projects Specialist**, **Scientific Consultant**, **Biologist-Scientific Expert** and **Biologist** for multi-billion companies like the **European Union**, **Help LTD**, **Lake Pamvotis Municipality Company**, **Hellenic Centre for Marine Research**, **Cargill** and **Nestle** just to name a few.

Mr. Paul has a **Master's** degree in **Food Science and Food Technology** from the **University of Ioannina** (**Greece**) and a **Bachelor's** degree in **Biology** from the **Aristotle University of Thessaloniki** (**Greece**). He is a **Certified Instructor/Trainer** and a **Member** of the **Society for Applied Microbiology**, **Society of Biological Scientist** and the **Global Coalition for Sustained Excellence in Food & Health Protection**.

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$ 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.

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, 21st of September 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0845	***Introduction to Quality Risk Management (QRM) - Today's International Business Environment***
0845 - 0930	***The Key Elements & Definitions of Quality Risk Management***
0930 – 0945	*Break*
0945 – 1030	***International Standards Related to Risk Management - ISO 31000 Standard***
1030 - 1130	***ISO 17025 Standard Requirements for Risk & Opportunity Management***
1130 – 1215	***Methods to Identify Risks & Opportunities in Analytical Laboratory - SWOT Analysis - Plan, Identify, Assess, Handle; Report***
1215 – 1230	*Break*
1230 – 1300	***Checklist - What-if Analysis***
1300 - 1330	***Checklist of Known Threats & Hazards***
1330 - 1420	***Brainstorming - Practical Exercise***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2: ***Monday, 22nd of September 2025***

0730 – 0800	***Delphi Technique***
0800 - 0830	***Structured or Semi-Structured Interviews***
0830 - 0930	***Failure Mode & Effect Analysis (FMEA) - Fault Tree Analysis (FTA)***
0930 – 0945	*Break*
0945 – 1030	***Hazard and Operability Analysis (HAZOP)***
1030 - 1130	***Future Scenarios, Scenario Analysis - The Six Fundamental Questions of Risk Assessment & Risk Management***
1130 – 1215	***Ishikawa Analysis (Fishbone)***
1215 – 1230	*Break*
1230 – 1300	***Case Studies - Practical Exercises***
1300 - 1330	***Ishikawa Analysis (Fishbone) - Practical Exercise***
1330 - 1420	***Workshop Presentation (Risk Identification)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3:	Tuesday, 23rd of September 2025
0730 – 0800	Evaluate the Risk- Event Tree Analysis (ETA)
0800 - 0830	Event Tree Analysis (ETA) - Practical Exercises
0830 - 0930	Evaluate the Risk- Quantitative Assessment - Consequence / Likelihood Matrix (Risk Matrix or Heat Map)
0930 – 0945	Break
0945 – 1030	Exercise-Quantitative Assessment - Consequence / Likelihood Matrix (Risk Matrix or Heat Map)
1030 - 1130	Case Studies, Workshop - Risk Assessment
1130 – 1215	Rank the Risks & Opportunities - Pareto Charts
1215 – 1230	Break
1230 – 1300	Manage Opportunity of your Laboratory
1300 - 1330	Impartiality: How to Manage the Risk
1330 - 1420	Documentation of Risk Management - Case Studies - Workshop
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4:	Wednesday, 24th of September 2025
0730 – 0800	Types of Risks in the Analytical Laboratory - Decision Rules
0800 - 0830	Types of Opportunities in the Analytical Laboratory
0830 - 0930	Audit Risk & Opportunity Management
0930 – 0945	Break
0945 – 1030	Case Studies-Risk Ranking
1030 - 1130	Workshop-Preliminary Risk Assessment
1130 – 1215	Nonconforming Work - Procedure
1215 – 1230	Break
1230 – 1300	Case Studies-Risk Ranking According ISO17025
1300 - 1330	Case Studies- Workshop: Lab Risk Assessment based on ISO 17025:2017 for Chemical Labs
1330 - 1420	Case Studies- Lab System Procedure (LSP) Actions to Address Risks & Opportunities
1420 – 1430	Recap
1430	Lunch & End of Day Four

Day 5:	Thursday, 25th of September 2025
0730 – 0800	Fault Tree Analysis (FTA)
0800 - 0830	Event Tree Analysis (ETA)
0830 - 0930	Applying Quality Risk Assessment Tools
0930 – 0945	Break
0945 – 1030	Control & Mitigation Strategies: Prevention or Protection?
1030 - 1100	Integrating QRM into your Organization
1100 – 1130	Setting Up a QRM Activity: Critical Success Factors to Consider When you are Setting up or Evaluating a Quality Risk Management Program, Including the Importance of Management Support
1130 – 1215	Suggestions for Early Risk Assessment Projects: Focus on What is Important
1215 – 1230	Break

1230 – 1300	***Writing a Procedure for Risk Assessment & Risk Management – Key Things to Include***
1300 - 1345	***What are the Next Steps***
1345 – 1400	***Course Conclusion***
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

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