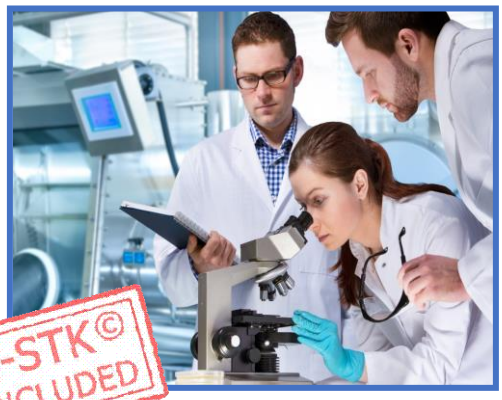
COURSE OVERVIEW LE0140-4D
Modern Laboratory Management
Effective Management of the Chemical Analysis Support



Course Title
Modern Laboratory Management: *Effective Management of the Chemical Analysis Support*

Course Date/Venue
November 11-14, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

2.4 CEUs (24 PDHs) AWARD

Course Reference
LE0140-4D

Course Duration/Credits
Four days/2.4 CEUs/24 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.

Analytical chemistry is experiencing dramatic, turbulent change beyond control of the laboratory and laboratory management. Technological innovations, staffing demographics, new business models, automation, industry consolidation, society and regulatory expectations, and other factors are transforming nearly aspect of the business.

This course takes a strategic view of the laboratory system in the context of current quality management philosophies to determine options for achieving best practices. Experiences will be shared to provide insight into the obstacles and expected outcomes for the various approaches. Further this course includes the mission and function of the analytical enterprise along with ways to improve the quality, performance and evaluation of the laboratory.

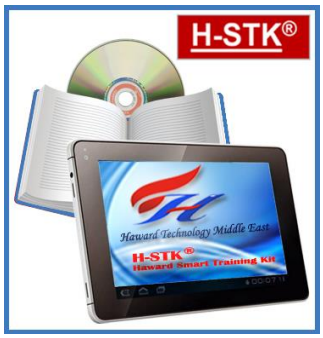
In this course, you will learn how laboratories are applying current management philosophies to get closer to the business and to streamline operations. Practical details of laboratory management such as cost control, maintaining analysis quality, improving laboratory reputation, effective staffing, capital budget justification, and so forth will be discussed but the emphasis will be on systems rather than daily operational issues. Participants are expected to share experiences and best practices.

Course Objectives

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

- Apply modern management philosophies in your laboratory
- Get solutions to your management problems from a leading authority
- Define and focus on the lab mission
- Organize to meet the requirements of a mission
- Improve abilities to listen and communicate
- Motivate staff and build teams
- Recognize the manager's job

Exclusive Smart Training Kit - H-STK®



*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials, sample video clips of the instructor's actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of modern laboratory management for laboratory managers, supervisors, chemists, chemical engineers, analysts and scientists.

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$ 4,500 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 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: -

- 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 **2.4 CEUs** (Continuing Education Units) or **24 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

- British Accreditation Council (BAC)

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

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Ms. Martha Julsing, MBA, MSc, BTech, is a **Senior Analytical Chemist** with over **25 years** of extensive experience within the **Oil & Gas** industries. Her expertise widely covers in the areas of **Analytical Laboratory** Management, **Modern Analytical Laboratory** Management, **Analytical Instrumentation**, Equipment, Safety & Quality (**ISO 17025**), **Analytical Instrumentation** for Laboratory, **Analytical Chemistry**, **Analytical Laboratory Quality Management** System, **Laboratory Consumables** Management, **Laboratory Instrument** Calibrations & Troubleshooting Techniques, Safety & Quality in **Scientific Laboratory**, **Laboratory** Skills, Good Laboratory Practice (**GLP**), **Spectroscopic** Methods in **Analytical Chemistry**, Quality Management System (**ISO 9001**), Total Quality Management System (**TQM**), Communication Management, **Atomic Absorption Spectrometry**, **Atomic Emission Spectroscopy**, **Wet Chemistry**, **X-Ray Florescence**, **X-Ray Fluorescence Spectrometry**, A**tomic Emission Spectroscopy**, **Inductively Coupled Plasma** (**ICP**) Practices, Techniques & Applications, **Seawater Analysis** of Heavy Metals in ICP, ICP-MS, ED-Xray, Hand Held XRF, Arc/Spark OES and **Spark Emission**. She is currently the **Quality Assurance Manager** of **Stabil-Lab** wherein she is responsible in the development, implementation and maintenance of the Quality Management System.

All throughout her career life, Ms. Julsing had occupied several challenging positions and dedication as the **Managing Director**, **Director**, **General Manager**, **Sales Manager**, **Project Manager**, **Head of the ICP Division**, **Head of Research Department**, **Principal Research Analyst**, **Product Specialist** and a **Senior Instructor/Trainer** for various companies such as Stabil-Lab, SPECTRO Analytical Instruments, Gencor Group, AMETEK Group, and Genmin Research Laboratories, just to name a few.

Ms. Julsing has a **Master's** degrees in **Business Administration** and **Applied Science Chemistry** from the **University of South Africa** and the **University of Pretoria**, **SA**, respectively, a **Bachelor of Technology** in **Chemistry** from the **Technikon Pretoria**, **SA**, a **Diploma** in **Business Management**, a **National Diploma** in **Analytical Chemistry** and held a certificate in **Public Relations**. Further, she is a **Certified Instructor/Trainer** and a corporate member of several professional societies such as the South African Institute of Assayers & Analysts, South African Chemical Society, South African Spectroscopic Society, South African Foundry Institute and an honorary secretary of Analytical Division and has delivered innumerable trainings, courses, seminars, conferences and workshops internationally.

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: ***Monday, 11th November 2024***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction*** *Lifestyle • Analytical Laboratories-Size and Types • Analytical Laboratories-Classification • Analytical Laboratory-Divisions • Large Analytical Laboratory-Instrumentation • Analytical Laboratory-Management • The Role of Needs in the Business Cycle • Prime Driving Force • Reasons for Attending the Course • Matured Adult Learners • Brief Contents of the Course • Current Position and Expectations*
0930 – 0945	*Break*
0945 – 1030	***Analytical Chemistry as Central Science in Science & Technology*** *Classical Domain • Modern Domain • Classification of Analytical Chemistry • Measurements • Definitions of Analytical Chemistry and Chemical Analysis • Nature of Analytical Tools • Wide Array of Tools Used in Analytical Chemistry • Classification of Analytical Measurement Tools • Complete Measurement System • The Analytical Process (Unit Operations)*
1030 – 1130	***Activities of Practicing Analytical Professionals*** *The Practicing Analytical Professionals • General Daily Operations/Tasks • Type of Work (Role) Within an Analytical Laboratory • Role Player Between the Clients (Customers) and Analytical Laboratory • Source of New Developments in the Analytical Domain*
1130 – 1230	***The Analytical Laboratory as Business Activity & Business Enterprise*** *The Business Environment in Perspective • The Analytical Laboratory in the Micro-Environment • Objectives and Strategy*
1230 – 1245	*Break*
1245 – 1420	***Vision & Mission, Goals, Planning & Organization (or Re-organization) of the Analytical Laboratory*** *Vision and Mission • Vision and Mission Document • Organization (or Re-organization) • Possible Ways to Organize (to Re-organize) • Tasks Descriptions • Advantages • Disadvantages*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2: ***Tuesday, 12th November 2024***

0730 – 0930	***Human Resource Management for the Analytical Laboratory: Recruitment & Staffing*** *Role of Analytical Staff Members • Position of Human Resources in Relation to the Analytical Laboratory • Job Creation or Re-creation • Job Analysis • Recruitment • Pre-selection Assessment • Factors to be Consider in the Curriculum Vitae • Setting up the Final Interview. Factors to be Consider • The Final Interview • The Final Decision*
0930 – 0945	*Break*

0945 – 1030	***Communication Management: Communications & Expectations*** *What is Communication? • Communication Phases • Types of Communication that Analytical Laboratories Engage in • Internal Communication • Four Simple Rules of Communication • A Communication Model • Barriers to Effective Communication • How to Overcome Communication Barriers • Some Listening Pitfalls for Managers and Supervisors • Good Listening Habits • Ways to Terminate a Conversation • Staff Meetings • Example of a Well-constructed Standard Method • External Communication*
1030 – 1130	***Purchasing & Inbound Logistics Management: Capital Investments, Buying Costly Instruments*** *Purchasing Objectives • Purchasing Activities • The Purchasing Cycle • Reasons and Justification for Instrument Purchases • Some Further Justifications for Instrument Purchases • Total Cost of Instrument Ownership • Steps in Obtaining Information for Final Decision • Factors for Comparing the Different Suppliers • Important Dates for Instrument Purchase • Writing of Old Equipment and Leasing*
1130 – 1230	***Analytical Laboratory Space Management: Design & Management of Physical Laboratory Space*** *Layout of the Laboratory. Work Dependence • Layout of the Laboratory. Old Laboratories • Example of Poorly Organized Laboratory Space • Example of a Better Organized Laboratory Space • Example of an Efficient Layout for an R&D or Process Development Laboratory • Design of an Efficient Large Analytical Laboratory • Partitions of an Efficient Large Analytical Laboratory • General Criteria for the Design of an Analytical Laboratory • Safety/Housekeeping Awareness in the Design of an Analytical Laboratory*
1230 – 1245	*Break*
1245 – 1420	***Management & Leadership: Organization & Decision-Making*** *What is Management? • Management Skills and Roles • Planning and Strategy • Traits (Characteristics, Quality) of a Person that Should be Promoted to Manager • Some Common Pitfalls of Managers • Management Organization • What is Leadership? • Leadership Principles • Leadership Approaches • Leadership Factors • Management Control • Managerial Decision-making • The Rational Decision-making Process*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3: ***Wednesday, 13th November 2024***

0730 – 0930	***Human Resource Management for the Analytical Laboratory: Placement, Incorporation, Training, Development, Performance Appraisal, Motivation & Staff Retention*** *Placement of Staff Members • Incorporation of a New Employee • Training and Development • The Training and Development Process • Training and Development Methods and Techniques • Principles of Learning • Performance Appraisal • Contributors to PERFORMANCE APPRAISAL • Categories and Techniques of Performance Appraisal • Criticism by Employees on PERFORMANCE APPRAISAL • Usefulness of PERFORMANCE APPRAISAL*
0930 – 0945	*Break*
0945 – 1030	***Laboratory Operation Management*** *Managing the Functional Activities of the Analytical Laboratory • The Workforce. Supervision • Standard Operation Procedures • Sampling and Sample Handling • Safety Management • Waste Management*

1030 – 1130	***Laboratory Performance Management: Quality Management, Good Laboratory Practice Compliance & Names Accreditation*** *Responsibility of the Laboratory Manager • Licensing • Certification and Accreditation • Why Consistent, Reliable and Accurate Data? • Why Validation and Qualification? • What is Good Laboratory Practice? (GLP) • Involvement on Validation Issues • Problems with Validation and Qualification • Sample and Data Flow with Validation and Qualification • What is Validation? • Outline of Validation • What is Testing? • What is Calibration? • What is Verification? • Differentiation between Verification and Validation • What is Qualification? • The Qualification Timeline • Equipment Qualification • Differences between Testing, Calibration, Qualification, Verification and Validation • Strategy for Development and Implementation of a Qualification and Validation System in a Laboratory • Validation and Qualification in the Analytical Laboratory • What do We Mean by Quality? • Quality Control and Quality Assurance • A Quality System • Total Quality Management (TQM) • Proficiency Testing Schemes • Organizations with Standards for Quality Systems • Quality Audit (QA) and Quality System Review (QSR) • Planning of Internal Quality Audits • Example of an Audit Report • Quality System Review • Checklist for Quality Audit • Organization and Coverage of Quality System Reviews • Agenda for a Quality System Review Meeting • Principals of GLP Compliance and NAMAS Accreditation*
1130 – 1230	***Financial Management: Expense & Capital Budget, Cost Control*** *Purpose of Financial Management • Laboratory's Involvement • The Expense Budget • Cost Estimating • Charging Costs • Relating Costs to Budget • Cost Control of Supplies and Materials • Evaluating Standard Test Productivity • The Capital Budget*
1230 – 1245	*Break*
1245 – 1420	***Information Management*** *Laboratory Information Management Systems (LIMS) • What is a LIMS? • Justification for a LIMS • Cost of a LIMS • Planning for a LIMS*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

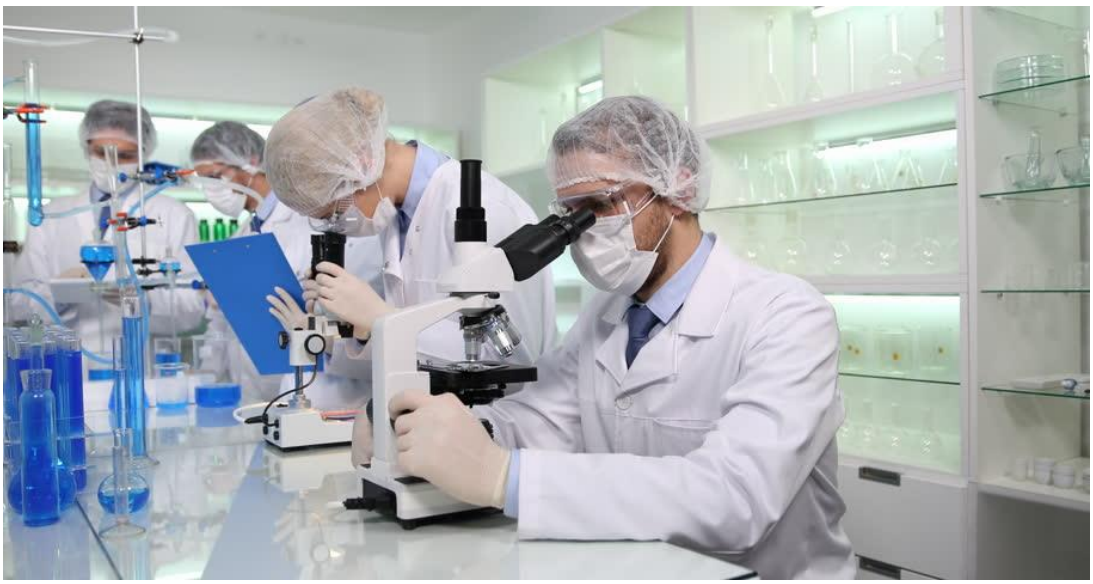
Day 4: ***Thursday, 14th November 2024***

0730 – 0930	***Benchmarking*** *What is Benchmarking? • What are Benchmarks used for? • Phases of Benchmarking • How to do Benchmarking? • Why Benchmark? • Summary of a Benchmark Questionnaire • An Analytical Benchmark Survey • Results of Laboratory Survey*
0930 – 0945	*Break*
0945 – 1030	***Future Developments*** *Forces Driving the Global Change • Forces Driving Change in the Analytical Laboratory • Technical Issues • Human Resources/ People Issues • Documentation • Financial/Laboratory Funding • Managing Rapid Change*
1030 – 1130	***Approach to Improving the Analytical Laboratory*** *Approach for Improvement • Development of Vision and Mission Statements • What is Wrong with the Laboratory? (with Respect to Meeting the Mission) • Set Goals and Priorities (Short-term and Long-term) • Some Long-term Goals • Some Measures of Success • Partnering • Ways to Increase Speed and Reduce Cost*

1130 – 1230	***Some Forms*** *Telephone Reference • Interview Material • ASTM Standard Method • Customer Complaint/Comment • Customer Survey • Project Request • Laboratory Housekeeping Rating*
1230 – 1245	*Break*
1245 – 1345	***Literature Cited***
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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