COURSE OVERVIEW TM0043
Root Cause Analysis – Certified

Course Title
Root Cause Analysis – Certified

Course Reference
TM0043

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

Course Date/Venue

Session(s)	Date	Venue
1	July 20-24, 2025	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
2	September 15-19, 2025	TBA Meeting Room, Grand Hyatt Athens, Athens, Greece
3	November 10-14, 2025	TBA Meeting Room, JW Marriott Hotel Madrid, Madrid, Spain
	January 12-16, 2026	Hampstead Meeting Room, London Marriott Hotel Regents Park, London, UK

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 Root Cause Analysis. It covers the importance, process and benefits of RCA; the roles and responsibilities; the different data collection techniques used in RCA; the appropriate data collection tools and tips for accurate data collection; analyzing data using statistical tools; the patterns and trends and data interpretation and validation; the brainstorming techniques for generating possible causes; organizing and structuring the causes using cause mapping; the fishbone or Ishikawa diagram; and identifying the root cause and narrowing down the possible causes.

Further, the course will also discuss the "5 Whys" technique and the effective solutions to address the root cause; the effectiveness of the implemented solutions, comparison of pre- and post-implementation data and continuous improvement of the solution; communicating RCA findings and recommendations to stakeholders; developing a comprehensive RCA report and tips for presenting data and findings effectively; the importance of teamwork in RCA, developing a collaborative RCA culture and building effective RCA teams; and the appropriate RCA tool for a specific situation.

During this interactive course, participants will learn the advantages and limitations of RCA tools and techniques; the RCA implementation plan and strategies for successful RCA implementation; overcoming barriers to RCA implementation; the relationship between RCA and quality assurance, incorporating RCA into the quality assurance process and the benefits of RCA in quality assurance; identifying the safety hazards through RCA and the role of RCA in improving laboratory safety; the relationship between RCA and risk management; identifying and assessing risks through RCA and incorporating RCA into risk management processes; the role of RCA in continuous improvement; the continuous improvement methodologies; the compliance requirements for RCA and incorporating RCA into regulatory compliance processes; developing RCA program; establishing RCA policies and procedures; and evaluating and improving the RCA program.

Course Objectives

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

- Apply and gain an in-depth knowledge on root cause analysis
- Discuss the importance of RCA including its process, benefits and the roles and responsibilities
- Apply the different data collection techniques used in RCA, select appropriate data collection tools and use tips for accurate data collection
- Analyze data using statistical tools, identify the patterns and trends and interprete and validate data
- Carryout brainstorming techniques for generating possible causes and organize and structure the causes using cause mapping
- Describe the fishbone or Ishikawa diagram, identify root cause and narrow down the possible causes
- Use the "5 Whys" technique to identify the root cause and verify the root cause through data analysis
- Develop effective solutions to address the root cause, apply criteria for selecting the best solution and implement planning and execution
- Ensure the effectiveness of the solution and monitor and document the implementation process
- Evaluate the effectiveness of the implemented solutions, compare pre- and post-implementation data and apply continuous improvement of the solution
- Communicate RCA findings and recommendations to stakeholders and develop comprehensive RCA report and tips for presenting data and findings effectively
- Discuss the importance of teamwork in RCA, develop a collaborative RCA culture and build effective RCA teams
- Choose the appropriate RCA tool for a specific situation and identify the advantages and limitations of RCA tools and techniques
- Develop RCA implementation plan and strategies for successful RCA implementation and overcome barriers to RCA implementation
- Determine the relationship between RCA and quality assurance, incorporate RCA into the quality assurance process and discuss the benefits of RCA in quality assurance
- Identify safety hazards through RCA and the role of RCA in improving laboratory safety

- Explain the relationship between RCA and risk management, identify and assess risks through RCA and incorporate RCA into risk management processes
- Discuss the role of RCA in continuous improvement, carryout continuous improvement methodologies and incorporate RCA into continuous improvement processes
- Explain the compliance requirements for RCA and incorporate RCA into regulatory compliance processes
- Develop RCA program, establish RCA policies and procedures and evaluate and improve the RCA program

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 root cause analysis for those involved in RCA in operations, production, maintenance, HSE, laboratory, quality, HRM, auditing, inspection, asset integrity, facility management, plant management, performance assessment, higher management, etc. This includes managers, engineers, analysts, specialists, supervisors, superintendents, foremen, technologists, chemists, lead and technicians.

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

Dubai	**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.
Athens	**US$ 8,800** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Madrid	**US$ 8,800** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
London	**US$ 8,800** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

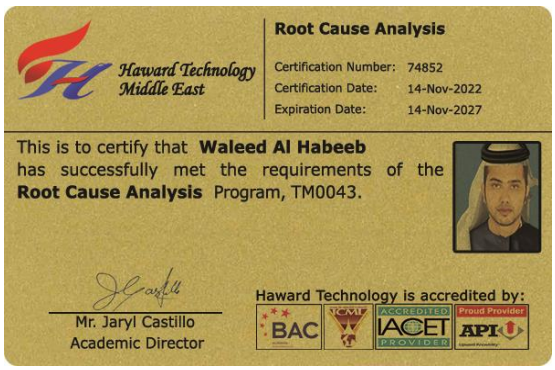
Course Certificate(s)

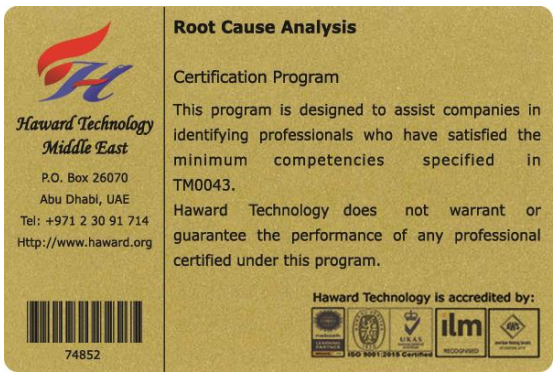
(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

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





(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: 14-Nov-22

HTME No. 74852

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
TM0043	Root Cause Analysis	November 10-14, 2022	30	3.0

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

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Authorized 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 1-2013 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 1-2013 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'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 **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.

Accommodation

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

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. Dimitry Rovas, CEng, MSc, PMI-PMP, SMRP-CMRP is a **Senior Mechanical & Maintenance Engineer** with extensive industrial experience in **Oil**, **Gas**, **Power** and **Utilities** industries. His expertise includes **Boiler** Inspection & Maintenance, **Boiler** Systems, **Boiler** instrumentation & Controls, **Boiler** Start-up & Shutdown, **Boiler** Operation & Steam System Management, **Boiler** Water Chemistry & Treatment, **Boiler** Efficiency & Waste Heat Recovery, **Boiler** Inspection & Testing, **Boiler** Maintenance, **Boiler** Troubleshooting & Safety, **Boiler** Emissions & Pollution Control, **Combustion** Analysis & Tuning Procedures, **Water Treatment** Technology, Heat Recovery Steam Generating (**HRSG**), **Impulse Tube** Installation & Inspection, **Parker Compression Fittings**, **Pipes & Fittings**, **PSV Inspection**, **Root Cause Failure Analysis**, **Tank** Design & Engineering, **Tank Shell**, **Tanks & Tank Farms**, **Vacuum Tanks**, **Gas Turbine** Operating & Maintenance, **Diesel Engine**, **Engine Cycles**, **Governors & Maintenance**, **Crankshafts** & Maintenance, **Lubrication** System Troubleshooting & Maintenance, **Engines/Drivers**, **Motor** Failure Analysis & Testing, **Motor** Predictive Maintenance, **Engine** Construction & Maintenance, **HP Fuel Pumps & Maintenance**, **Fired Equipment** Maintenance, Combustion **Techniques**, **Process Heaters**, Glass Reinforced Epoxy (**GRE**), Glass Reinforced Pipes (**GRP**), Glass Reinforced Vent (**GRV**), **Mechanical Pipe Fittings**, **Flange Joint Assembly**, Adhesive Bond Lamination, **Butt Jointing**, **Joint & Spool Production**, **Isometric Drawings**, **Flange Assembly** Method, **Fabrication & Jointing**, Jointing & Spool Fabrication, **CAESAR**, **Pipe Stress Analysis**, **Pipe Cuttings**, **Flange Bolt Tightening** Sequence, **Hydro Testing**, **Pump** Technology, Fundamentals of **Pumps**, **Pump** Selection & Installation, **Centrifugal Pumps & Troubleshooting**, **Reciprocating & Centrifugal Compressors**, **Screw Compressor**, **Compressor** Control & Protection, **Gas & Steam Turbines**, **Turbine** Operations, **Gas Turbine** Technology, **Valves**, **Process Control Valves**, **Bearings & Lubrication**, Advanced **Machinery Dynamics**, **Rubber Compounding**, **Elastomers**, **Thermoplastic**, **Industrial Rubber Products**, **Rubber** Manufacturing Systems, **Heat Transfer**, **Vulcanization Methods**, **Process Plant Shutdown & Turnaround**, **Professional Maintenance Planner**, Advanced **Maintenance Management**, **Maintenance Optimization & Best Practices**, **Maintenance Auditing & Benchmarking**, **Material Cataloguing**, **Reliability** Management, **Rotating Equipment**, **Energy Conservation**, **Energy Loss Management** in Electricity Distribution Systems, **Energy Saving**, **Thermal Power Plant** Management, **Thermal Power Plant** Operation & Maintenance, **Heat Transfer**, **Machine Design**, **Fluid Mechanics**, **Heating & Cooling Systems**, **Heat Insulation Systems**, **Heat Exchanger & Cooling Towers**, **Mechanical Erection**, **Heavy Rotating Equipment**, Material Unloading & Storage, Commissioning & Start-Up. He is currently the **Project Manager** wherein he is managing, directing and controlling all activities and functions associated with the domestic heating/cooling facilities projects.

During his life career, Mr. Rovas has gained his practical and field experience through his various significant positions and dedication as the **EPC Project Manager**, **Maintenance Manager**, **Mechanical Engineer**, **Field Engineer**, **Preventive Maintenance Engineer**, **Lead Rotating Equipment Commissioning Engineer**, **Construction Commissioning Engineer**, **Offshore Lead Maintenance Engineer**, **Researcher**, **Instructor/Trainer**, **Telecom Consultant** and **Consultant** from various companies such as the Mytilineos Aluminium Group, Podaras Engineering Studies, Metka and Diadikasia, S.A., **Hellenic Petroleum Oil Refinery** and COSMOTE.

Mr. Rovas has **Master's** degrees in **Energy Production & Management** and **Mechanical Engineering** from the **National Technical University of Athens** (**NTUA**), **Greece**. Further, he is a **Certified Instructor/Trainer**, a **Certified Maintenance and Reliability Professional** (**CMRP**) from the Society of Maintenance & Reliability Professionals (**SMRP**), **Certified Project Management Professional** (**PMI-PMP**), **Certified Six Sigma Black Belt**, **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**), **Certified Construction Projects Contractor**, **Certified Energy Auditor** and a **Chartered Engineer**. Moreover, he is an active member of **American Society for Quality**, Project Management Institute (**PMI**), **Body of Certified Energy Auditors** and **Technical Chamber of Greece**. He has further received various recognition and awards and delivered numerous trainings, seminars, courses, workshops and conferences 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

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Root Cause Analysis (RCA)*** *What is RCA and Why it is Important? • The RCA Process and Its Benefits • Roles & Responsibilities*
0930 – 0945	*Break*
0945 – 1100	***Data Collection Techniques*** *Different Data Collection Techniques Used in RCA • Selection of Appropriate Data Collection Tools*
1100 – 1230	***Data Collection Techniques (cont'd)*** *Tips for Accurate Data Collection*
1230 – 1245	*Break*
1245 – 1420	***Analyzing Data*** *Analyzing Data Using Statistical Tools • Identifying Patterns and Trends • Data Interpretation and Validation*
1420 - 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0900	***Brainstorming & Cause Mapping*** *Brainstorming Techniques for Generating Possible Causes • Organizing and Structuring the Causes Using Cause Mapping • The Fishbone or Ishikawa Diagram*
0900 – 0915	*Break*
0915 – 1100	***Identifying the Root Cause*** *Narrowing Down the Possible Causes • Using the "5 Whys" Technique to Identify the Root Cause • Verification of the Root Cause Through Data Analysis*
1100 – 1230	***Developing Solutions*** *Developing Effective Solutions to Address the Root Cause • Criteria for Selecting the Best Solution • Implementation Planning and Execution*
1230 – 1245	*Break*
1245 – 1420	***Implementing Solutions*** *Ensuring the Effectiveness of the Solution • Monitoring the Implementation Process • Documenting the Implementation Process*
1420 - 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Evaluating the Effectiveness of Solutions*** *Evaluating the Effectiveness of the Implemented Solutions • Comparison of pre- and post-Implementation Data • Continuous Improvement of the Solution*
0930 – 0945	*Break*
0945 – 1100	***Communication & Reporting*** *Communicating RCA Findings and Recommendations to Stakeholders • Developing a Comprehensive RCA Report • Tips for Presenting Data and Findings Effectively*

1100 – 1230	***RCA Teamwork*** *The Importance of Teamwork in RCA • Developing a Collaborative RCA Culture • Building Effective RCA Teams*
1230 – 1245	*Break*
1245 – 1420	***RCA Tools & Techniques*** *Choosing the Appropriate RCA Tool for a Specific Situation • Advantages and Limitations of RCA Tools and Techniques*
1420 - 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

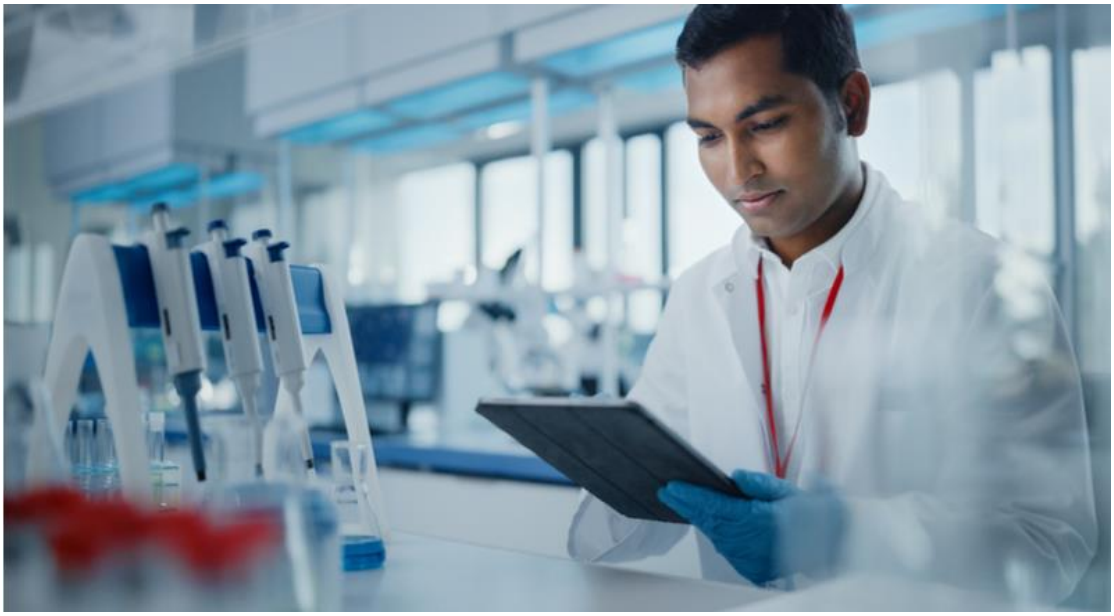
0730 – 0930	***RCA Case Studies*** *Case Studies to Illustrate the RCA Process • Analysis of RCA Case Studies • Learning from RCA Case Studies*
0930 – 0945	*Break*
0945 – 1100	***RCA Implementation Strategies*** *Developing an RCA Implementation Plan • Strategies for Successful RCA Implementation • Overcoming Barriers to RCA Implementation*
1100 – 1230	***RCA & Quality Assurance*** *The Relationship Between RCA and Quality Assurance • Incorporating RCA Into the Quality Assurance Process • Benefits of RCA in Quality Assurance*
1230 – 1245	*Break*
1245 – 1420	***RCA & Safety*** *The Relationship Between RCA and Safety • Identifying Safety Hazards Through RCA • The Role of RCA in Improving Laboratory Safety*
1420 - 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***RCA & Risk Management*** *The Relationship Between RCA and Risk Management • Identifying and Assessing Risks Through RCA • Incorporating RCA Into Risk Management Processes*
0930 – 0945	*Break*
0945 – 1100	***RCA & Continuous Improvement*** *The Role of RCA in Continuous Improvement • Continuous Improvement Methodologies • Incorporating RCA Into Continuous Improvement Processes*
1100 – 1200	***RCA & Regulatory Compliance*** *The Relationship Between RCA and Regulatory Compliance • Compliance Requirements for RCA • Incorporating RCA Into Regulatory Compliance Processes*
1200 – 1215	*Break*
1215 – 1300	***RCA Program Development*** *Developing an RCA Program • Establishing RCA Policies and Procedures • Evaluating and Improving the RCA Program*
1300 – 1315	***Course Conclusion***
1315 – 1415	***COMPETENCY EXAM***
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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