

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	September 28-October 02, 2025	Meeting Plus 9, City Centre Rotana, Doha Qatar
2	October 12-16, 2025	Crowne Meeting Room, Crowne Plaza Al Khobar, an IHG Hotel, Al Khobar, KSA
3	November 02-06, 2025	Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE
4	December 15-19, 2025	Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

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 interpret 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 “Howard 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

Doha	US\$ 6,000 per Delegate. This rate includes H-STK® (Howard Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Al Khobar/Dubai/Abu Dhabi	US\$ 5,500 per Delegate + VAT . This rate includes H-STK® (Howard Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

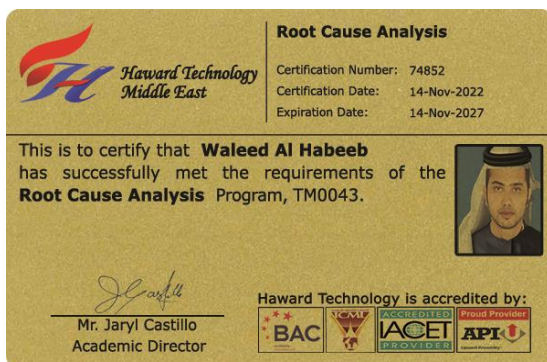
Course Certificate(s)

(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 * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *



Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEUs

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










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Certificate Accreditations

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

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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.

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

Day 2

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

Day 3

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



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

Day 4

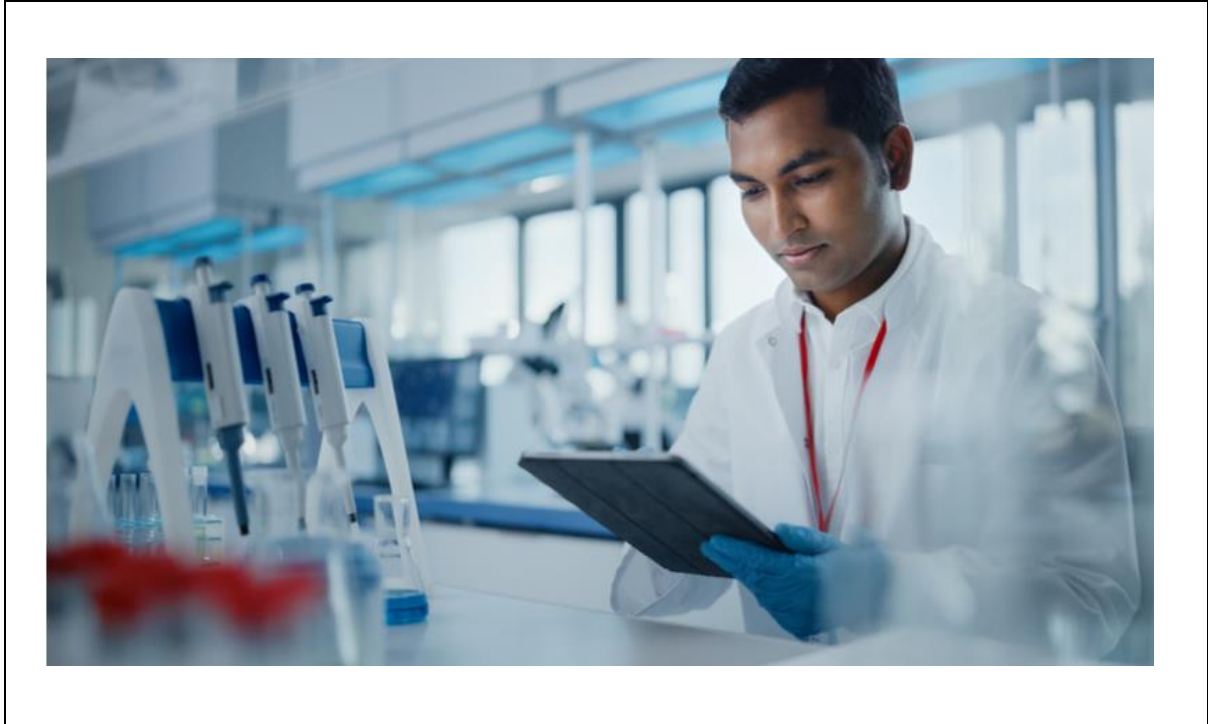
0730 – 0930	RCA Case Studies <i>Case Studies to Illustrate the RCA Process • Analysis of RCA Case Studies • Learning from RCA Case Studies</i>
0930 – 0945	Break
0945 – 1100	RCA Implementation Strategies <i>Developing an RCA Implementation Plan • Strategies for Successful RCA Implementation • Overcoming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

Day 5

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