

**COURSE OVERVIEW EE0852**  
**Electrical & Instrumentation Inspection (Certification)**

**Course Title**

Electrical & Instrumentation Inspection (Certification)

**Course Date/Venue**

September 01-05, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

**Course Reference**

EE0852

**Course Duration/Credits**

Five days/3.0 CEUs/30PDHs



**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 delegates with an up-to-date overview of certified electrical and instrumentation inspector. It covers the comprehensive knowledge, general requirements inspections, electrical and instrument document, material selection, installation and safety checklist for electrical inspections; the general wiring methods and identify boxes and conduit boxes, cabinets and cutout boxes, switches and receptacles, services, feeders and branch circuits; and the grounding and bonding and identify the general electrical inspection checklists.



During this interactive course, participants will learn the commercial and industrial inspections for motors, transformers, capacitors, signs and outline lighting; the hazardous locations checklist, instrument controller, piping and instrument diagram; the fire and gas detection and ESD (emergency shutdown) procedures and telecommunication; and the Calibration and function test instrument and identify hazardous location as well as basic and regulation inspection.

## Course Objectives

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

- Get certified as a “*Certified Electrical and Instrumentation Inspector*”
- Apply and gain a comprehensive knowledge on electrical and instrumentation inspection
- Recognize the general requirements inspections, electrical and instrument document, material selection, installation and safety checklist for electrical inspections
- Explain the general wiring methods and identify boxes and conduit boxes, cabinets and cutout boxes, switches and receptacles, services, feeders and branch circuits
- Describe grounding and bonding and identify the general electrical inspection checklists
- Carryout commercial and industrial inspections for motors, transformers, capacitors, signs and outline lighting
- Illustrate hazardous locations checklist, instrument controller, piping and instrument diagram
- Employ fire and gas detection and ESD (emergency shutdown) procedures and telecommunication
- Calibrate and function test instrument and identify hazardous location as well as basic and regulation inspection

## 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 electrical and instrumentation inspection of instruments and electrical measuring equipment for those who are involved in the field of electrical and instrumentation inspection including inspection engineers, electrical engineers, electrical inspection engineers and instrumentation engineers. Further, this course is also beneficial to those engineers who are vital participants in industrial settings and those who are familiar with electrical devices, their function and the standards of operation set by the engineering industry.

## 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 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.

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**Haward Technology Middle East**

Continuing Professional Development (HTME-CPD)

**CEUs**

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### CEU Official Transcript of Records

**TOR Issuance Date:** 14-Nov-19

**HTME No.** 8667-2014-9020-2555

**Participant Name:** Abdulsatar Al Otaibi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
EE0852	Electrical and Instrumentation Inspection (Certification)	November 10-14, 2019	30	3.0

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

**TRUE COPY**



Maricel De Guzman  
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 800, 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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\* Haward Technology \* CEUs \* Haward Technology \* CEUs \* Haward Technology \* CEUs \* Haward Technology \*

## 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 **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.

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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**. 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.

## 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. Pan Marave, PE, MSc, BEng**, is a **Senior Electrical Instrumentation Engineer** with over **40 years** of extensive experience in **Power & Water Utilities** and Other **Energy Sectors**. His experience includes **Electrical Safety, Power System Equipment, Electrical Drawing, Transmission Networks, Substation, Cable & Over Head Line, Substation Automation Systems & Application, Distribution Networks, Circuit Breaker, HV Switchgear Maintenance, HV Electrical Authorisation, Basic Electricity, Electrical & Special Hazards, Personal Protection, HV/LV Equipment, Motor Controllers, Electrical Switching Practices, Uninterruptible Power Supply (UPS), UPS and Battery System, Preventive Maintenance of Battery Charger and UPS System, UPS, DC System & Battery Design, Operation, Maintenance & Troubleshooting, Emergency Planning, Safety Management, Safety Instrumented Systems (SIS), Safety Integrity Level (SIL), Emergency Shutdown (ESD); Electrical Installation, Maintenance & Troubleshooting, Electrical Inspection & Testing, Electrical Measurements, Power Flow Analysis, Electrical Power Systems, Electrical Fundamentals, Basic Electricity & Electrical Codes, DCS, SCADA & PLC; Measurement (Flow, Temperature, Pressure), Process Analyzers & Analytical Instrumentation; Process Control Instrumentation & Safeguarding; Process Controller, Control Loop & Valve Tuning; Industrial Distribution Systems; Industrial Control & Control Systems, Power Systems Protection & Relaying; Earthing, Bonding, Grounding, Lightning Surge Protection; Electric Power Substation & Systems; Electrical Engineering Principles; Motor Control Circuit; Electrical Fault Analysis; Electrical Networks, Distribution Cables; Circuit Breakers, Switchgears, Transformers, Hazardous Areas Classification and Detailed Engineering Drawings, Codes & Standards. Furthermore, he is also well-versed in Microprocessors Structure, Lead Auditor (ISO 9000:2000), ISO 9002, Quality Assurance, and Projects & Contracts Management.**

Presently, Mr. Marave is the **Technical Advisor** of **Chamber of Industry & Commerce** in Greece. Prior to this, he gained his thorough practical experience through several positions as the **Technical Instructor, Engineering Manager, Electronics Instruments Head, Electrical, Electronics & Instruments Maintenance Superintendent, Assistant General Technical Manager** and **Engineering Supervisor** of various international companies such as the **Alumil Mylonas, Athina Papermill, Astropol** and the **Science Technical Education**.

Mr. Marave is a **Registered Professional Engineer** and has **Master's and Bachelor's** degree in **Electrical Engineering** from the **Polytechnic Institute of New York** and **Pratt Institute of New York (USA)** respectively. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and an active member of the **Technical Chamber of Industry & Commerce** and the **Institute of Electrical and Electronics Engineer (IEEE)** in Greece. He has presented and delivered **numerous international** courses, conferences, trainings and workshops worldwide.

### **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.

### **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, 01<sup>st</sup> of Sunday 2024**

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	General Requirements Inspections
0930 – 0945	Break
0945 – 1045	Electrical & Instrument Document
1045 – 1200	Material Selection
1200 – 1215	Break
1215 – 1330	Installation
1330 – 1420	Safety Checklist for Electrical Inspections
1420 – 1430	Recap
1430	Lunch & End of Day One

#### **Day 2: Monday, 02<sup>nd</sup> of Sunday 2024**

0730 – 0900	General Wiring Methods
0900 – 0915	Break
0915 – 1100	Boxes & Conduit Bodies
1100 – 1230	Cabinets & Cutout Boxes
1230 – 1245	Break
1245 – 1420	Switches & Receptacles
1420 – 1430	Recap
1430	Lunch & End of Day Two

#### **Day 3: Tuesday, 03<sup>rd</sup> of Sunday 2024**

0730 – 0930	Services, Feeders & Branch Circuits
0930 – 0945	Break
0945 – 1100	Grounding & Bonding
1100 – 1215	General Electrical Inspection Checklists
1215 – 1230	Break
1230 – 1420	Commercial & Industrial Inspections Motors • Transformers • Capacitors • Signs and Outline Lighting
1420 – 1430	Recap
1430	Lunch & End of Day Three

#### **Day 4: Wednesday, 04<sup>th</sup> of Sunday 2024**

0730 – 0930	Hazardous Locations Checklist Checklist of Class I Locations • Checklist of Class II Locations • Checklist of Class III Locations
0930 – 0945	Break

0945 – 1100	<i>Instrument Controller</i>
1100 – 1215	<i>Piping &amp; Instrument Diagram</i>
1215 – 1230	<i>Break</i>
1230 – 1420	<i>Fire &amp; Gas Detection &amp; ESD (Emergency Shutdown)</i>
1420 – 1430	<i>Recap</i>
1430	<i>Lunch &amp; End of Day Four</i>

**Day 5: Thursday, 05<sup>th</sup> of Sunday 2024**

0730 – 0930	<i>Telecommunication</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Calibrate &amp; Function Test Instrument</i>
1100 – 1200	<i>Hazardous Location</i>
1200 – 1215	<i>Break</i>
1215 – 1300	<i>Basic &amp; Regulation Inspection</i>
1300 – 1315	<i>Course Conclusion</i>
1315 – 1415	<b>COMPETENCY EXAM</b>
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch &amp; End of Course</i>

**Practical Sessions**

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



**Course Coordinator**

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