



## COURSE OVERVIEW EE0408(OM1) Certification Electrical & Electrical Licensing

### Course Title

Certification Electrical & Electrical Licensing

### Course Reference

EE0408(OM1)

### Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



### Course Date/Venue

Session(s)	Date	Venue
1	January 21-25, 2024	Jubail Hall, Signature Al Khobar Hotel, Al Khobar, KSA
2	March 03-07, 2024	Cheops Meeting Room, Radisson Blu Hotel, Istanbul Sisli, Turkey
3	June 09-13, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
4	September 09-13, 2024	Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

### Course Description



***This practical and highly-interactive course includes real-life case studies 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 certification electrical and electrical licensing. It covers the basic electricity and HV/LV (high voltage & low voltage) installation in fertilizer industries; the theory and operation of different electrical equipment like motors, transformers, etc.; the detailed theoretical & practical sessions for HV/LV switchgear; the knowledge and skills required to safely work with energies HV/LV electric power systems; the principles and procedures for safe operation and maintenance of HV/LV systems in accordance with the latest international standards; and the safely isolation and working with equipment like transformers, switches, isolators, fuses, circuit breakers, etc.



During this interactive course, participants will learn the hazards involved while working with electricity like live testing/working, overloads, short circuits, earth faults, fires, etc.; the tools, tackles and PPE's most suitable to work with the HV/LV systems; the safety documentation and procedures for safe operations and isolations of electrical equipment; the troubleshooting while working with the electrical systems; the control system for electrical equipment; and the principles and operations of over current protection, earth fault protection, differential protection.





### Course Objectives

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

- Apply and gain a comprehensive knowledge on certification electrical and electrical licensing
- Explain basic electricity and HV/LV (high voltage & low voltage) installation in fertilizer industries
- Discuss theory and operation of different electrical equipment like motors, transformers, etc.
- Employ detailed theoretical & practical sessions for HV/LV switchgear
- Identify knowledge and skills required to safely work with energies HV/LV electric power systems
- Recognize principles and procedures for safe operation and maintenance of HV/LV systems in accordance with the latest international standards
- Illustrate safely isolation and working with equipment like transformers, switches, isolators, fuses, circuit breakers, etc.
- Monitor hazards involved while working with electricity like live testing/working, overloads, short circuits, earth faults, fires, etc.
- Recognize tools, tackles and PPE's most suitable to work with the HV/LV systems
- Discuss safety documentation and procedures for safe operations and isolations of electrical equipment
- Perform troubleshooting while working with the electrical systems
- Explain control system for electrical equipment
- Identify principles and operations of over current protection, earth fault protection, differential protection

### 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 certification electrical and electrical licensing for electrical engineers, supervisors and technicians.



**Training Methodology**

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Workshops & Work Presentations
- 30% Case Studies & Practical Exercises
- 20% Software, Simulators & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

**Course Fee**

Al Khobar	<b>US\$ 5,500</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Istanbul	<b>US\$ 6,000</b> per Delegate + <b>VAT</b> . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	<b>US\$ 5,500</b> per Delegate + <b>VAT</b> . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Abu Dhabi	<b>US\$ 5,500</b> per Delegate + <b>VAT</b> . 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.



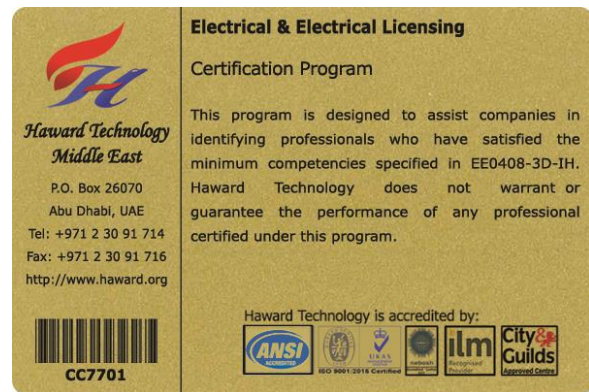
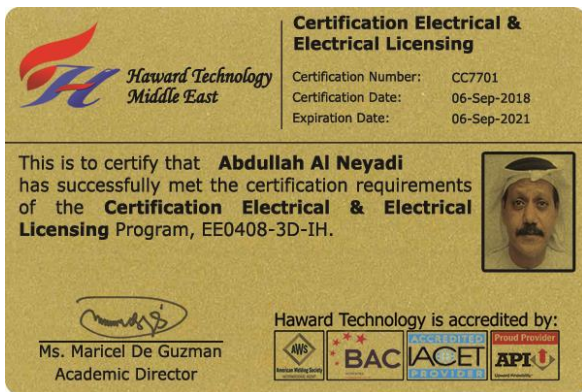
**Course Certificate(s)**

(1) Internationally recognized Wall Competency Certificates and Plastic Wallet Card Certificates 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)

**CEU Official Transcript of Records**

**TOR Issuance Date:** 06-Sep-18  
**HTME No.** PAR15510  
**Participant Name:** Abdullah Al Neyadi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
EE0408-3D-IH	Certification Electrical & Electrical Licensing	September 04-06, 2018	19.5	1.95

Total No. of CEU's Earned as of TOR Issuance Date **1.95**

**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), 1760 Old Meadow Road, Suite 500, McLean, VA 22102, 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

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.



### 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. Ahmed Abozeid** is a **Senior Electrical Engineer** with over **30 years** of **Onshore & Offshore** experience within the **Oil & Gas, Refinery, Petrochemical** and **Power** industries. His wide expertise covers **HV Cable Design, Cable Splicing & Termination, Cable Jointing Techniques, High Voltage Electrical Safety, HV/MV Cable Splicing, High Voltage Circuit Breaker Inspection & Repair, High Voltage Power System Safe Operation, High Voltage Safety, High Voltage Transformers, Safe Operation of High Voltage & Low Voltage Power Systems, Electric Distribution System Equipment, Practical Troubleshooting of Electrical Equipment & Control Circuits, Electrical & Control System Testing & Commissioning, LV/MV/HV Circuit Breakers Inspection & Maintenance, Electrical Power Substation Maintenance, Practical High Voltage Safety Operating Procedures, Modern Power System Protective Relaying, Electrical & Control System Testing, Design, Commissioning, Operation and Maintenance of Switchgears, Transformers, Substations, Medium & High Voltage Equipment and Circuit Breakers, Electrical Motors & Variable Speed Drives, Motor Speed Control, Power Electronic Converters, AC Converters Section, Electromagnetic Compatibility (EMC), Motor Failure Analysis & Testing, Machinery Fault Diagnosis, Bearing Failure Analysis Process Control & Instrumentation, Process Control Measurements, Control System Commissioning & Start-Up, Control System & Monitoring, Power Station Control System, Instrumentation Devices, Process Control & Automation, PID Controller, Distributed Control Systems (DCS), Programmable Logic Controllers (PLC), ABB PLC & DCS System, Gas Analyzers, Simulation Testing, Load Flow, Short Circuit, Smart Grid, Vibration Sensors, Cable Installation & Commissioning, Calibration Commissioning and Site Filter Controller. Further, he is also well-versed in **Fundamentals of Electricity, Electrical Standards, Electrical Power, PLC, Electrical Wiring, Machines, Transformers, Motors, Power Stations, Electro-Mechanical Systems, Automation & Control Systems, Voltage Distribution, Power Distribution, Filters, Automation System, Electrical Variable Speed Drives, Power Systems, Power Generation, Power Transformers, Diesel Generators, Power Stations, Uninterruptible Power Systems (UPS), Battery Chargers and AC & DC Transmission. He is currently the Project Manager** wherein he manages, plans and implements projects across different lines of business.**

Mr. Ahmed worked as the **Electrical Manager, Assistant General Technical Manager, Electronics & Instruments Head, Electrical Power & Machine Expert, Electrical Process Leader, Team Leader, Electrical Team Leader, Electronics & Instruments Maintenance Superintendent, Engineering Supervisor, Technical Instructor** and **Instructor/Trainer** from various companies such as the Lafarge Nigeria, Egyptian Cement Company, ECC Training Center, Alrajhi Construction & Building Company and Ameria Cement Company, just to name a few.

Mr. Ahmed has a **Bachelor's** degree in **Electrical Engineering**. Further, he is a **Certified Instructor/Trainer** and has 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 &amp; Coffee</i>
0800 – 0815	<i>Welcome &amp; Introduction</i>
0815 – 0830	<b>PRE-TEST</b>
0830 – 0930	<b><i>Basic Electricity and HV/LV (High Voltage &amp; Low Voltage) Installation in Fertilizer Industries</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Theory &amp; Operation of Different Electrical Equipment like Motors, Transformers, etc.</i></b>
1100 – 1230	<b><i>Detailed Theoretical &amp; Practical Sessions for HV/LV Switchgear</i></b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b><i>Detailed Theoretical &amp; Practical Sessions for HV/LV Switchgear (cont'd)</i></b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

#### **Day 2**

0730 – 0930	<b><i>Knowledge &amp; Skills Required to Safely Work with Energies HV/LV Electric Power Systems</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Principles &amp; Procedures for Safe Operation &amp; Maintenance of HV/LV Systems in Accordance with the Latest International Standards</i></b>
1100 – 1230	<b><i>Safely Isolation &amp; Working with Equipment like Transformers, Switches, Isolators, Fuses, Circuit Breakers, etc.</i></b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b><i>Safely Isolation &amp; Working with Equipment like Transformers, Switches, Isolators, Fuses, Circuit Breakers, etc. (cont'd)</i></b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Two</i>

#### **Day 3**

0730 – 0930	<b><i>Hazards involved while Working with Electricity like Live Testing/Working, Overloads, Short Circuits, Earth Faults, Fires, etc.</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Hazards involved while Working with Electricity like Live Testing/Working, Overloads, Short Circuits, Earth Faults, Fires, etc. (cont'd)</i></b>
1100 – 1230	<b><i>Tools, Tackles &amp; PPE's Most Suitable to Work with the HV/LV systems</i></b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b><i>Tools, Tackles &amp; PPE's Most Suitable to Work with the HV/LV systems (cont'd)</i></b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Three</i>





**Day 4**

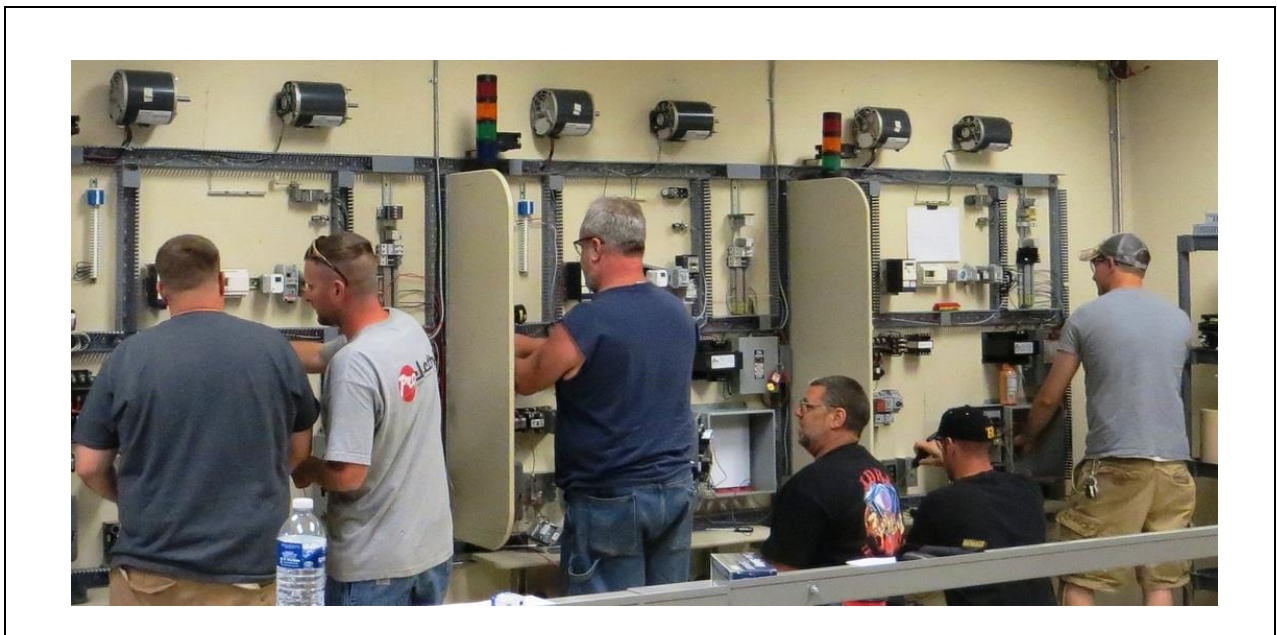
0730 – 0930	<i>Safety Documentation &amp; Procedures for Safe Operations &amp; Isolations of Electrical Equipment</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Safety Documentation &amp; Procedures for Safe Operations &amp; Isolations of Electrical Equipment (cont'd)</i>
1100 – 1230	<i>Troubleshooting while Working with the Electrical Systems</i>
1230 – 1245	<i>Break</i>
1245 – 1420	<i>Troubleshooting while Working with the Electrical Systems (cont'd)</i>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Four</i>

**Day 5**

0730 – 0930	<i>Control System for Electrical Equipment</i>
0930 – 0945	<i>Break</i>
0945 – 1030	<i>Control System for Electrical Equipment (cont'd)</i>
1030 – 1200	<i>Principles &amp; Operations of Over Current Protection, Earth Fault Protection, Differential Protection</i>
1200 – 1215	<i>Break</i>
1215 – 1330	<i>Principles &amp; Operations of Over Current Protection, Earth Fault Protection, Differential Protection (cont'd)</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**

Kamel Ghanem, Tel: +971 2 30 91 714, Email: [Kamel@haward.org](mailto:Kamel@haward.org)

