

**COURSE OVERVIEW EE0633(KM1)**  
**Certified High Voltage Safety**

**Course Title**

Certified High Voltage Safety

**Course Reference**

EE0633(KM1)

**Course Duration/Credits**

Five days/3.0 CEUs/30 PDHs



Session(s)	Dates	Venue
1	September 16-20, 2024	Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
2	December 08-12, 2024	Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA

**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 high voltage safety. It covers the overhead transmission and distribution line network; the safe work protocols including the use of lockout/tagout and safe equipment preparation; the general works safety, the proper use of personal protective equipment and face mask; the installation, operation and maintenance instruction manuals; and the electrical safety standards.



During this interactive course, participants will learn the HV equipment including power transformers, switches, isolators and fuses, circuit breakers, instrument transformer, surge arrestors, capacitor banks, earth and shunt reactors; the test equipment and electrical switching; the electrical and special hazards; the safety management, de-energized and energized work; and the confined space and personnel protection.

### Course Objectives

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

- Get certified and be authorized to work on high voltage electrical power systems
- Discuss the overview of overhead transmission and distribution line network
- Employ safe work protocols including the use of lockout/tagout as well as prepare safe equipment
- Carryout general works safety and implement the proper use of personal protective equipment and face mask
- Use installation, operation and maintenance instruction manuals
- Apply proper technology, techniques and procedures on High Voltage (HV) electrical safety
- Explain the electrical safety standards
- Describe HV equipment including power transformers, switches, isolators and fuses, circuit breakers, instrument transformer, surge arrestors, capacitor banks as well as earth and shunt reactors
- Illustrate test equipment and discuss electrical switching as well as electrical and special hazards
- Employ safety management and review de-energized and energized work
- Identify confined space and employ personnel 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, 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 high voltage safety for engineers, high voltage fitter and other technical staff.

### 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.

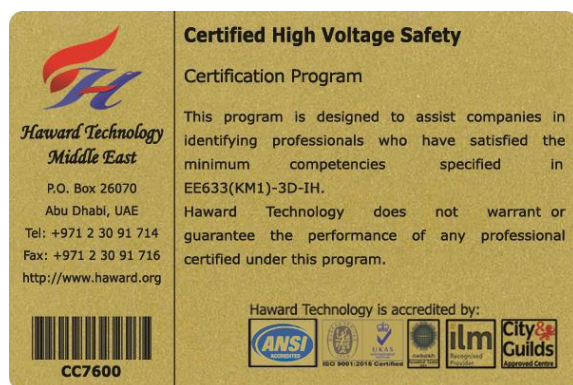
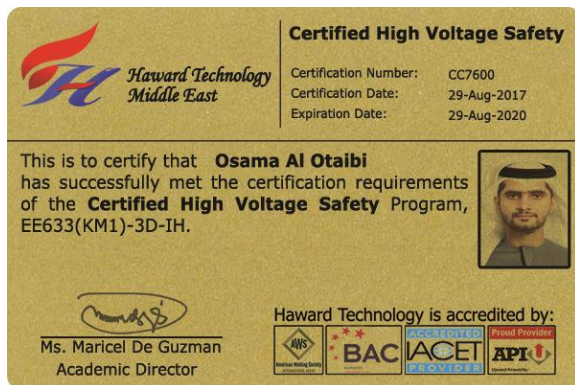
**Course Certificate(s)**

(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. Successful candidate will be certified and authorized to work on high voltage electrical power systems. 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**

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### CEU Official Transcript of Records

**TOR Issuance Date:** 29-Aug-17

**HTME No.** PAR12117

**Participant Name:** Osama Al Otaibi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
EE633(KM1) -3D-IH	Certified High Voltage Safety	August 27-29, 2017	19.5	1.95
<b>Total No. of CEU's Earned as of TOR Issuance Date</b>				<b>1.95</b>

**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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\* Haward Technology \* CEUs \* Haward Technology \* CEUs \* Haward Technology \* CEUs \* Haward Technology \*



### **Certificate Accreditations**


Certificates are accredited by the following international accreditation organizations:-

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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.

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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 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.

### **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. Steve Mark, PE, MSc (on-going), BSc**, is a **Senior Electrical & Telecommunications Engineer** with over **20 years** of extensive experience within the **Oil & Gas, Petrochemical** and **Power** industries specializing in **Certified Electrical Safety Compliance Professional, Overhead Power Line Maintenance Patrolling & Washing, Energy Transmission & Distribution, Transmission Line Structures, Insulators & Accessories, Transmission Line Construction & Maintenance, Insulated Power Cables, High Voltage Applications, Transmission Line Parameters, Sag & Tension of Conductor, Geomagnetic**

**Disturbances, Reactive Power Compensation, Overhead Line Troubleshooting, Patrolling, Troubleshooting Safety, HV/LV Equipment, High Voltage Electrical Safety, LV & HV Electrical System, HV Equipments Inspection & Maintenance, HV Switchgear Operation & Maintenance, LV Distribution Switchgear & Equipment, Basic Electricity, Electrical & Special Hazards, Personnel Protection, Motor Controllers, Electrical Switching Practices, Emergency Planning, Safety Management, Earthing & Bonding Installation, Energized & De-Energized Work, Protection Relays, Testing & Commissioning, Lock & Tag Out, Circuit Breakers & Switchgears, Portable Cables, Transformers, Surge Arrestors, Isolators & Fuses, Capacitor Banks, Earth & Shunt Reactors, Gas Insulated Substations (GIS), HV Substation Inspection & Reporting, HV Cable Design, HV Electrical System Commissioning, HV Equipments Inspection & Maintenance, UPS & Generators, Electrical Installations Design & Construction, Electrical Mechanical Installations, GIS Substations, GE Turbine Power Plant and Steam Power Plants.** Further, he is also well-versed in **Network & System Administration, Data/Voice Networking, Network Capacity Calculations, VPN Connection Implementation, Structured Cabling Constructions, Engineering Design, Security Installations Design & Implementation, Logistics Management, IT Analysis, Business Continuity Plan Design, Disaster Recovery Simulations, Supply Chain System Design, Barcode Marking & RFID Applications.** He is currently the **Lead Electrical Engineer** of Public Power Corporation S.A wherein he is responsible for site manufacturing supervision of works and electrical maintenance support for the existing Steam Electrical Power Plant.

During his career life, Mr. Mark has gained his expertise and thorough practical experience through handling challenging positions such as being the **IT & Telecommunications Manager, IT & Organization Manager, Logistics Manager, Electrical Engineer, Safety Engineer, Public Works Contractor, IT Support Analyst, Project Supervisor, Systems & Network Administrator, Data Protection Officer, Shop Auditor** and Amateur Radio Operator for various multi-national companies and institutes.

Mr. Mark is a **Registered Professional Engineer**, has a Bachelor degree in **Electrical Engineering** from the **Technical University of Halkida, Euboea, Greece** and currently enrolled for **Master degree in Quality Management** from the **Hellenic Open University**. Further, he is a **Certified Instructor/Trainer, a Certified Safety Engineer** and a **Certified Data Protection Officer (DPO)**. Moreover, he is a member of Scientific Society of Technological Education of Engineers (EETEM) and has delivered numerous trainings, courses, seminars, 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>Overview of Overhead Transmission &amp; Distribution Line Network</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Safe Work Protocols</i></b>
1100 – 1230	<b><i>Lockout/Tagout</i></b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b><i>Safe Equipment Preparation</i></b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day One</i>

#### **Day 2**

0730 – 0900	<b><i>General Works Safety &amp; Proper Use of Personal Protective Equipment &amp; Face Mask</i></b>
0900 – 0915	<i>Break</i>
0915 – 1100	<b><i>Using Installation, Operation &amp; Maintenance Instruction Manuals</i></b>
1100 – 1230	<b><i>High Voltage (HV) Electrical Safety Proper Technology</i></b>
1230 – 1245	<i>Break</i>
1245 – 1420	<b><i>High Voltage (HV) Electrical Safety (cont'd) Techniques • Procedures</i></b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Two</i>

#### **Day 3**

0730 – 0930	<b><i>Electrical Safety Standards</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>HV Equipment Power Transformers • Switches • Isolators and Fuses • Circuit Breakers</i></b>
1100 – 1215	<b><i>HV Equipment (cont'd) Instrument Transformer • Surge Arrestors • Capacitor Banks • Earth And Shunt Reactors</i></b>
1215 – 1230	<i>Break</i>
1245 – 1420	<b><i>Test Equipment</i></b>
1420 – 1430	<b>Recap</b>
1430	<i>Lunch &amp; End of Day Three</i>

#### **Day 4**

0730 – 0930	<b><i>Electrical Switching</i></b>
0930 – 0945	<i>Break</i>
0945 – 1100	<b><i>Electrical Switching (cont'd)</i></b>
1100 – 1215	<b><i>Electrical &amp; Special Hazards</i></b>

1215 - 1230	<i>Break</i>
1245 - 1420	<i>Electrical &amp; Special Hazards (cont'd)</i>
1420 - 1430	<i>Recap</i>
1430	<i>Lunch &amp; End of Day Four</i>

**Day 5**

0730 - 0930	<i>Safety Management</i>
0930 - 0945	<i>Break</i>
0945 - 1100	<i>De-Energized &amp; Energized Work</i>
1100 - 1215	<i>Confined Space</i>
1215 - 1230	<i>Break</i>
1230 - 1300	<i>Personnel Protection</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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