COURSE OVERVIEW EE0452
HV Switching

Course Title
HV Switching

Course Date/Venue
June 12-16, 2026/TBA Meeting Room, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
EE0452

Course Date/Venue
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions where participants will be engaged in HV/LV power switching and other working practices.

This course is designed to provide participants with a detailed and up-to-date overview of HV/MV Switching & Switchgear Operation, Safety & Maintenance Including Marine 6.6 kV Systems. It covers the legislation and standards of high voltage switching operations; the risk management and control as well as the proper approach to high voltage-safe systems of work, permit types and permit procedures; operating local high voltage and low voltage switchgear; developing high voltage switchgear program; controlling permit to work operations; performing switching to a switching program; coordinating and directing switching program; and working safely near live electrical apparatus.

During this interactive course, participants will learn the access procedures to work on or near electrical network infrastructure; the HV field switching operation and power system substation switching operation to a given schedule; developing high voltage switching schedule; coordinating power systems permit procedures; directing power system switching schedules; and solving the energy supply network equipment problems in a professional manner.

Course Objectives/Outcomes & Benefits for the Participants

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

- Get certified as a "*Certified Switchman*"
- Review the legislation and standards of high and medium voltage switching operations
- Carryout risk management and control as well as the proper approach to high and medium voltage-safe systems of work, permit types and permit procedures
- Operate high voltage, discuss MV marine 6.6 kV switchgear systems and develop high voltage switchgear program
- Apply control permit to work operations, perform switching to a switching program as well as coordinate and direct switching program
- Work safely near live electrical apparatus
- Apply access procedures to work on or near electrical network infrastructure
- Perform HV field switching operation and power system substation switching operation to a given schedule
- Develop high voltage switching schedule and coordinate power systems permit procedures and direct power system switching schedules
- Solve energy supply network equipment problems in a professional manner

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 HV/MV switching and switchgear operation, safety and maintenance including marine 6.6 kV systems for electrical workers and engineers working with high and low voltage switchgear in industrial facilities and networks.

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.

Learning Design & Customization

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

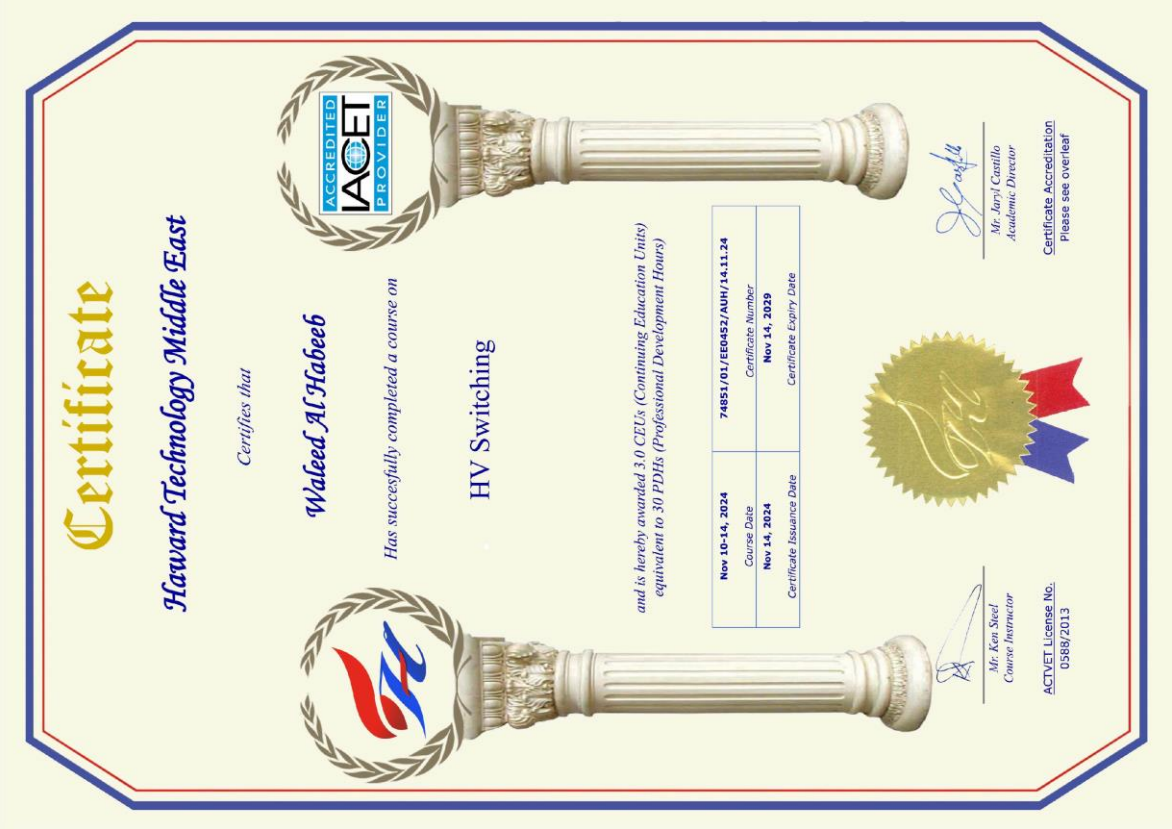
Course Certificate(s)

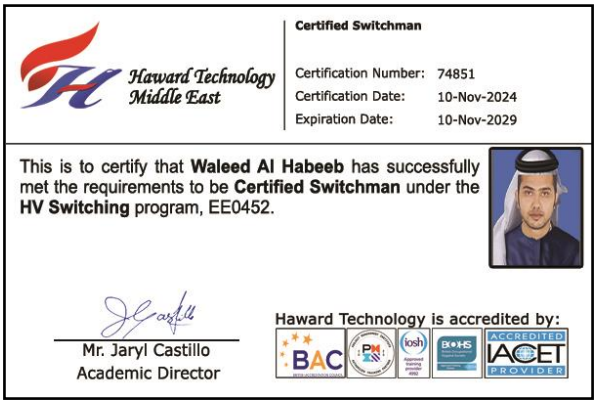
(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a "*Certified Switchman*". Certificates 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-24

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
EE0452	HV Switching	Nov 10-14, 2024	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 Accredited 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 1-2018 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 1-2018 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.

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:

Dr. Ahmed El-Sayed, PhD, MSc, BSc, is a **Senior Electrical & Instrumentation Engineer** with over **30 years** of extensive experience in the **Power**, **Petroleum**, **Petrochemical** and **Utilities**. He specializes in **HV/LV Equipment**, **High Voltage Electrical Safety**, **LV & HV Electrical System**, **HV Equipment's Inspection & Maintenance**, **HV Switchgear Operation & Maintenance**, **LV Distribution Switchgear & Equipment**, **HV Switchgear Maintenance**, **HV/LV Electrical** Authorisation, **Hazardous Area Classification, Power Quality**, **Disturbance Analysis**, **Blackout**, **Power Network**, **Power Distribution**, **Power Systems Control**, **Power Systems Security**, Power **Electronics**, **ETAP**, Electrical **Substations**, Tariff Design & Structure Analysis, **Engineering Drawings, Codes & Standards**, **P&ID Reading, Interpretation & Developing**, **PLC**, **SCADA**, **DCS**, **Process Control**, **Instrumentation**, **Automation**, Power **Generation**, **Process Control Instrumentation**, **SIS**, **SIL**, **ESD**, **Alarm Management Systems**, **Fieldbus Systems** and **Fiber Optics** as well as the service pricing of these. He is currently the **Systems Control Manager** of **Siemens** where he is in-charge of Security & Control of Power **Transmission Distribution** & **High Voltage** Systems and he further takes part in the Load Records Evaluation & Transmission Services Pricing.

During his career life, Dr. Ahmed has been actively involved in different Power System Activities including Roles in Power System Planning, Analysis, Engineering, **HV Substation** Design, Electrical Service Pricing, Evaluations & Tariffs, Project Management and also in Teaching and Consulting. His vast industrial experience was honed greatly when he joined many International and National Companies such as **Siemens**, **Electricity Authority** and **ACETO** industries where he focused more on dealing with Technology Transfer, System Integration Process and Improving Localization. He was further greatly involved in manufacturing some of **Power System** and **Control & Instrumentation Components** such as Series of Digital Protection **Relays**, MV **VFD**, **PLC** and **SCADA** System with intelligent features.

Dr. Ahmed is well-versed in different electrical and instrumentation fields like Load Management Concepts, **PLC** Programming, Installation, Operation and Troubleshooting, **AC Drives** Theory, Application and Troubleshooting, Industrial Power Systems Analysis, AC & DC **Motors**, Electric Motor **Protection**, **DCS SCADA**, **Control** and Maintenance Techniques, Industrial Intelligent Control System, **Power Quality** Standards, Power Generators and Voltage Regulators, Circuit Breaker and Switchgear Application and Testing Techniques, **Transformer** and **Switchgear** Application, Grounding for Industrial and Commercial Assets, Power Quality and **Harmonics**, **Protective Relays** (O/C Protection, Line Differential, Bus Bar Protection and **Breaker Failure Relay**) and Project Management Basics (PMB).

Dr. Ahmed has **PhD**, **Master's** & **Bachelor's** degree in **Electrical** and **Instrumentation Engineering** from the **University of Wisconsin Madison**, **USA**. Further, he has numerous papers published internationally in the areas of Power Quality, Superconductive Magnetic Energy Storage, SMES role in Power Systems, Power System **Blackout** Analysis, and Intelligent Load Shedding Techniques for preventing Power System Blackouts, HV **Substation Automation** and Power System Stability.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Friday, 12th of June 2026***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Legislation & Standards***
0930 – 0945	*Break*
0945 – 1030	***Risk Management & Control***
1030 – 1130	***Approach to High & Medium Voltage – Safe Systems of Work, Permit Types & Permit Procedures***
1130 – 1215	***HV Switchgear***
1215 – 1230	*Break*
1230 – 1330	***MV Marine 6.6 kV Switchgear System***
1330 – 1420	***Develop HV Switchgear Program***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2: ***Saturday, 13th of June 2026***

0730 – 0830	***Control Permit to Work Operations***
0830 - 0930	***Perform Switching to a Switching Program***
0930 – 0945	*Break*
0945 – 1100	***Coordinate & Direct Switching Program***
1100 – 1215	***Working Safely near Live Electrical Apparatus***
1215 – 1230	*Break*
1230 – 1330	***Apply Access Procedures to Work on or Near Electrical Network Infrastructure***
1330 – 1420	***Perform HV Field Switching Operation to a Given Schedule***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3: ***Sunday, 14th of June 2026***

0730 – 0830	***Perform Power System Substation Switching Operation to a Given Schedule***
0830 – 0930	***Develop High Voltage Switching Schedule***
0930 – 0945	*Break*
0945 – 1100	***Coordinate Power Systems Permit Procedures***
1100 – 1215	***Coordinate & Direct Power System Switching Schedules***
1215 – 1230	*Break*
1230 – 1420	***Solve Problems in Energy Supply Network Equipment***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4: **Monday, 15th of June 2026**

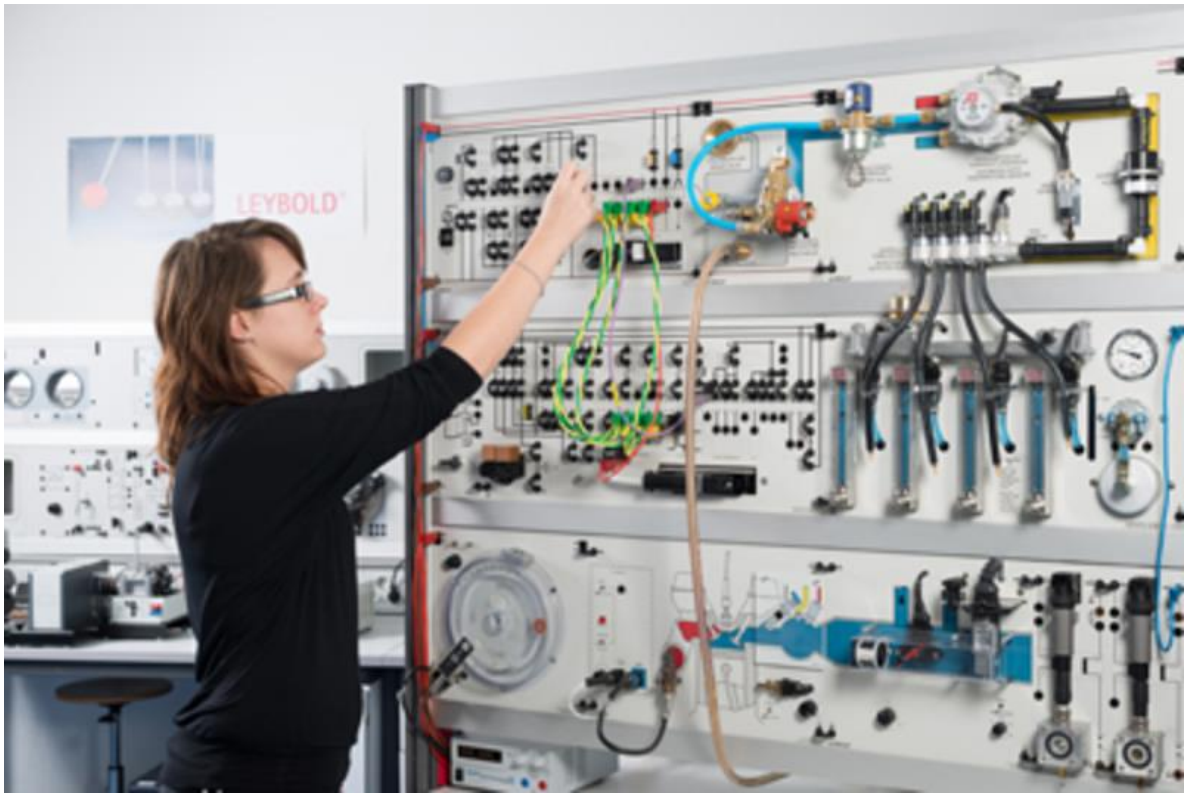
0730 – 0830	***Practical Sessions*** *Switching Programs*
0830 – 0930	***Practical Sessions (cont'd)*** *Isolation Certificates*
0930 – 0945	*Break*
0945 – 1100	***Practical Sessions (cont'd)*** *Electrical Permit to Work*
1100 – 1215	***Practical Sessions (cont'd)*** *Danger Notices & Pre-Cautions*
1215 – 1230	*Break*
1230 – 1330	***Practical Sessions (cont'd)*** *Sanction for Test*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5: **Tuesday, 16th of June 2026**

0730 – 0930	***Practical Sessions (cont'd)*** *Log-Out & Tag-Out*
0930 – 0945	*Break*
0945 – 1100	***Practical Sessions (cont'd)*** *Safe Key Systems*
1100 – 1200	***Practical Sessions (cont'd)*** *Electrical Safety Systems- Interlocks-Earthing-Isolation & Access Control*
1200 – 1215	*Break*
1215 – 1245	***Practical Sessions (cont'd)*** *Fault Reports*
1245 – 1300	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1300 – 1400	***COMPETENCY EXAM***
1400 – 1415	*Evaluation of Competency Exam*
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes the following practical sessions using Haward's HV Switchgears:-



(1) Switching Programs
(2) Isolation Certificates
(3) Electrical Permit to Work
(4) Danger Notices & Pre-Cautions
(5) Sanction for Test
(6) Lock-Out & Tag-Out
(7) Safe Key Systems
(8) Electrical Safety Systems-Interlocks-Earthing-Isolation & Access Control
(9) Fault Reports

Course Coordinator

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