



COURSE OVERVIEW EE0628

NFPA 70E: Standard for Electrical Safety in the Workplace

Course Title

NFPA 70E: Standard for Electrical Safety in the Workplace

Course Date/Venue

Session 1: February 01-05, 2026/Crowne Meeting Room, Crowne Plaza Al Khobar, Al Khobar, KSA

Session 2: August 02-06, 2026/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai UAE



Course Reference

EE0628



Course Duration/Credits

Five days/4.0 CEUs/40 PDHs

Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.



This course is designed to provide participants with a detailed and up-to-date overview of electrical safety in the workplace in accordance with NFPA 70E standards. It covers the safety related work practices and procedures; the general requirements for electrical safety-related practices; establishing an electrically safe work condition; the work involving electrical hazards; and the safety-related and general maintenance requirements for various electrical equipment and facilities for substations, switchgears assemblies, switchboards, panel boards, motor control centres and disconnected switches.



During this interactive course, participants will learn the premises wiring; the controller equipment, fuses and circuit breakers; the rotating equipment, hazardous locations, batteries and battery rooms; the portable electric tools and equipment; the personal safety and protective equipment; the safety requirements for special equipment; and the safety related work practices for electrolytic cells, batteries and battery rooms, lasers, power electronic equipment research and development laboratories and capacitors.

Course Objectives

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

- Apply the latest electrical safety procedures and practices in the workplace in accordance with the international practice of NFPA 70E
- Carryout safety related work practices and procedures
- Identify the general requirements for electrical safety-related practices
- Establish an electrically safe work condition and recognize the work involving electrical hazards
- Recognise the safety-related and general maintenance requirements for various electrical equipments and facilities including substations, switchgears assemblies, switchboards, panelboards, motor control centers and disconnected switches
- Illustrate premises wiring and identify controller equipment, fuses and circuit breakers, rotating equipment, hazardous locations, batteries and battery rooms, portable electric tools and equipment
- Use personal safety and protective equipment as well as apply safety requirements for special equipment
- Employ safety-related work practices for electrolytic cells, batteries and battery room, lasers, power electronic equipment, research and development laboratories and capacitors

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 is designed for supervisors, engineers, inspectors, safety officers, construction workers and electrical maintenance and installation technicians that work on or around electrical equipment or installation which have voltage of 50 or more. This course is designed to meet the safety training requirements of OSHA 29 CFR 1910.332 and the National Electric Code.

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 Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

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**. 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 **4.0 CEUs** (Continuing Education Units) or **40 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. Sydney Thoresson, PE, BSc, is a **Senior Electrical & Instrumentation Engineer** with over **30 years** of extensive experience within the **Petrochemical, Utilities, Oil, Gas** and **Power** industries. His specialization highly evolves in **Process Control Instrumentation, Process Instrumentation & Control, Process Control, Instrumentation, Troubleshooting & Problem Solving, Instrumentation Engineering, Process Control (PCI) & Safeguarding, Instrument Calibration & Maintenance, Instrumented Safety Systems, High Integrity Protection Systems (HIPS), Process Controller, Control Loop & Valve Tuning, Compressor Control & Protection, Control Systems, Programmable Logic Controllers (PLC), SCADA System, PLC & SCADA - Automation & Process Control, PLC & SCADA Systems Application, Technical DCS/SCADA, PLC-SIMATIC S7 300/400: Configuration, Programming and Troubleshooting, PLC, Telemetry and SCADA Technologies, Cyber Security of Industrial Control System (PLC, DCS, SCADA & IED), Basics of Instrumentation Control System, DCS, Distributed Control System - Operations & Techniques, Distributed Control System (DCS) Principles, Applications, Selection & Troubleshooting, Distributed Control Systems (DCS) especially in Honeywell DCS, H&B DCS, Modicon, Siemens, Telemecanique, Wonderware and Adroit, Safety Instrumented Systems (SIS), Safety Integrity Level (SIL), Emergency Shutdown (ESD), Emergency Shutdown System, Variable Frequency Drive (VFD), Process Control & Safeguarding, Field Instrumentation, Instrumented Protective Devices Maintenance & Testing, Instrumented Protective Function (IPF), Refining & Rotating Equipment, Equipment Operations, Short Circuit Calculation, Voltage Drop Calculation, Lighting Calculation, Hazardous Area Classification, Intrinsic Safety, Liquid & Gas Flowmetering, Custody Measurement, Ultrasonic Flowmetering, Loss Control, Gas Measurement, Flowmetering & Custody Measurement, Multiphase Flowmetering, Measurement and Control, Mass Measuring System Batching (Philips), Arc Furnace Automation-Ferro Alloys, Walking Beam Furnace, Blast Furnace, Billet Casting Station, Cement Kiln Automation, Factory Automation and Quality Assurance Accreditation (ISO 9000 and Standard BS 5750). Further, he is also well-versed in **Electrical Safety, Electrical Hazards Assessment, Electrical Equipment, Personal Protective Equipment, Log-Out & Tag-Out (LOTO), ALARP & LOPA Methods, Confined Workspaces, Power Quality, Power Network, Power Distribution, Distribution Systems, Power Systems Control, Power Systems Security, Power Electronics, Electrical Substations, UPS & Battery System, Earthing & Grounding, Power Generation, Protective Systems, Electrical Generators, Power & Distribution Transformers, Electrical Motors, Switchgears, Transformers, AC & DC Drives, Variable Speed Drives & Generators and Generator Protection**. He is currently the **Projects Manager** wherein he manages projects in the field of electrical and automation engineering and in-charge of various process hazard analysis, fault task analysis, FMEA and HAZOP study.**

During Mr. Thoresson's career life, he has gained his thorough and practical experience through various challenging positions and dedication as the **Contracts & Projects Manager, Managing Director, Technical Director, Divisional Manager, Plant Automation Engineer, Senior Consulting Engineer, Senior Systems Engineer, Consulting Engineer, Service Engineer and Section Leader** from several international companies such as **Philips, FEDMIS, AEG, DAVY International, BOSCH, Billiton and Endress/Hauser**.

Mr. Thoresson is a **Registered Professional Engineering Technologist** and has a **Bachelor's degree in Electrical & Electronics Engineering** and a **National Diploma in Radio Engineering**. 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 **International Society of Automation (ISA)** and the **Society for Automation, Instrumentation, Measurement and Control (SAIMC)**. He has further delivered numerous trainings, courses, seminars, conferences and workshops worldwide.





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 NFPA 70E
0930 - 1030	Safety Related Work Practices
1030 – 1045	<i>Break</i>
1045 – 1200	Definitions
1200 - 1300	Application of Safety-Related Work Practices & Procedures
1300 - 1315	<i>Break</i>
1315 - 1420	General Requirements for Electrical Safety -Related Work Practices
1420 - 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2

0730 – 0900	Establishing an Electrically Safe Work Condition
0900 - 1030	Work Involving Electrical Hazards
1030 - 1045	<i>Break</i>
1045 – 1200	Safety-Related Maintenance Requirements
1200 - 1300	General Maintenance Requirements
1300 – 1315	<i>Break</i>
1315 - 1420	Substations, Switchgear Assemblies, Switchboards, Panelboards, Motor Control Centers & Disconnect Switches
1420 - 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3

0730 – 0900	Premises Wiring
0900 - 1030	Controller Equipment
1030 - 1045	<i>Break</i>
1045 – 1200	Fuses & Circuit Breakers
1200 - 1300	Rotating Equipment
1300 – 1315	<i>Break</i>
1315 - 1420	Hazardous (Classified) Locations
1420 - 1430	Recap
1430	<i>Lunch & End of Day Three</i>

Day 4

0730 – 0900	Batteries & Battery Rooms
0900 - 1030	Portable Electronic Tools & Equipment
1030 - 1045	<i>Break</i>



1045 - 1200	<i>Personal Safety & Protective Equipment</i>
1200 - 1300	<i>Safety Requirement for Special Equipment</i>
1300 - 1315	<i>Break</i>
1315 - 1420	<i>Safety-Related Work Practices for Electrolytic Cells</i>
1420 - 1430	<i>Recap</i>
1430	<i>Lunch & End of Day Four</i>

Day 5

0730 - 0900	<i>Safety Requirements Related to Batteries & Battery Rooms</i>
0900 - 1000	<i>Safety-Related Work Practices: Lasers</i>
1000 - 1015	<i>Break</i>
1015 - 1115	<i>Safety-Related Work Practices: Power Electronic Equipment</i>
1115 - 1215	<i>Safety-Related Work Requirements: Research & Development Laboratories</i>
1215 - 12330	<i>Break</i>
1230 - 1345	<i>Safety-Related Requirements for Capacitors</i>
1345 - 1400	<i>Course Conclusion</i>
1400 - 1415	<i>POST-TEST</i>
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>



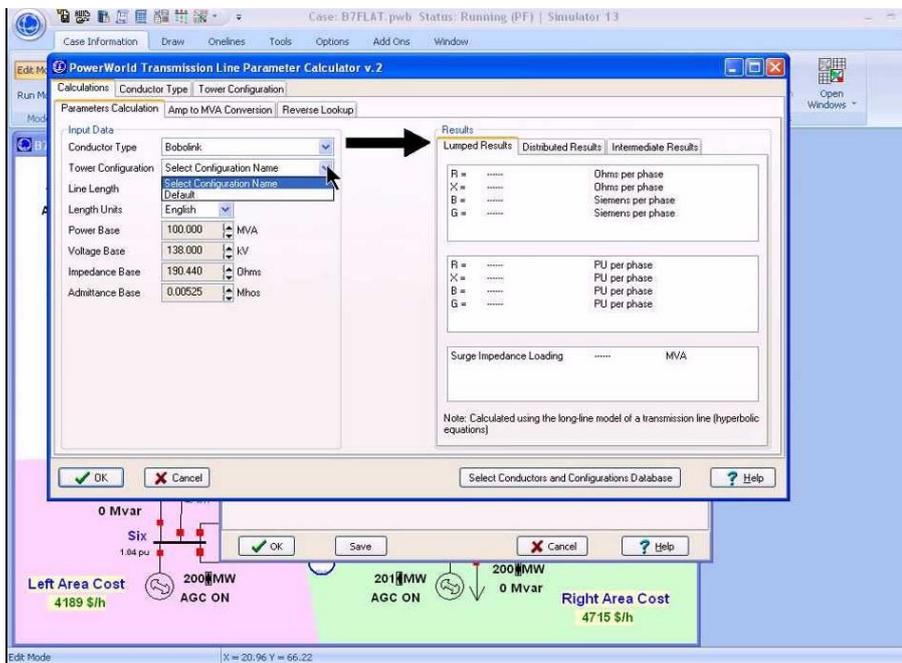
Simulators (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art simulators “Simutech Troubleshooting Electrical Circuits V4.1”, “Power World”, “GE Multilin Relay 469” and “GE Multilin Relay 750”

The simulator interface is divided into two main sections. The top section displays a 3D-style physical layout of an electrical control panel. It includes a terminal block (TB1) with L, N, and G terminals, a fuse (FU), six pushbuttons (PB1-PB6) with ON/OFF indicators, a relay (R1), and two indicator lamps (L1, L2). The bottom section, titled "HOW THE CIRCUIT WORKS", shows a detailed schematic diagram of the circuit. A text box explains: "When a pushbutton is pressed the light and relay connected to this pushbutton become energized. This seals the relay in, closing normally open (N/O) contacts and opening normally closed (N/C) contacts. The seal in contact allows the coil and light to remain energized when the pushbutton is released." The interface also features a control panel on the right with buttons for "Tools", "Circuit Operation", "Observe", "Tips", "Leave Fault", "Main Menu", "Narrations: On Off", and "Exit". A digital display shows "Elapsed Time 00:00" and "Expenditures \$0.00".



Simutech Troubleshooting Electrical Circuits V4.1



Power World Simulator



GE Multilin Relay 469 Simulator



GE Multilin Relay 750 Simulator

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org