COURSE OVERVIEW EE1030
Certified Electrical Safety Compliance Professional
(NFPA - CESCP Exam Preparation Training)

Course Title
Certified Electrical Safety Compliance Professional *(NFPA - CESCP Exam Preparation Training)*



Course Date/Venue
Session 1: May 02-06, 2027/Meeting Plus 9, City Centre Rotana Doha Hotel, Doha, Qatar
Session 2: November 28-December 02, 2027/Meeting Plus 9, City Centre Rotana Doha Hotel, Doha, Qatar



Course Reference
EE1030

Course Duration/Credits
Five days/4.0 CEUs/40 PDHs

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 comprehensive course is designed to prepare participants for the NFPA Certified Electrical Safety Compliance Professional (CESCP) certification and to develop competence in implementing and managing electrical safety programs based on NFPA 70E: standard for electrical safety in the workplace. The CESCP certification validates an individual's knowledge of electrical safety compliance, hazard identification, risk assessment, safe work practices, program management and regulatory compliance.

Further, the course will also discuss the fundamentals of electrical hazards, electrical injuries and accidents; the OSHA and regulatory compliance requirements and electrical safety program fundamentals; the roles and responsibilities in electrical safety and electrical hazard identification; the electrical risk assessment procedures, shock risk assessment and arc flash risk assessment; the risk control methods, electrical hazard analysis and establishing an electrically safe work condition (ESWC); and the lockout/tagout (LOTO) requirements, energized electrical work and personal protective equipment (PPE).

During this interactive course, participants will learn the electrical tools, test equipment, job planning and safety briefings; the electrical equipment maintenance requirements, switchgear and circuit breaker safety, motor control centers and industrial systems; the transformers and power distribution systems and electrical safety auditing and compliance; the incident investigation, root cause analysis, electrical safety program management and contractor electrical safety management; and the emergency response and electrical rescue and advanced electrical safety applications.

Course Objectives/Outcomes & Benefits for the Participants

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

- Get prepared for the next CESCP Exam and have enough knowledge and skills to pass such exam in order to get the Certified Electrical Safety Compliance Professional from The National Fire Protection Association (NFPA)
- Discuss the fundamentals of electrical hazards, electrical injuries and accidents and OSHA and regulatory compliance requirements
- Explain electrical safety program fundamentals, roles and responsibilities in electrical safety and electrical hazard identification
- Apply electrical risk assessment procedures, shock risk assessment and arc flash risk assessment
- Carryout risk control methods, electrical hazard analysis and establishing an electrically safe work condition (ESWC)
- Identify lockout/tagout (LOTO) requirements, energized electrical work and personal protective equipment (PPE)
- Recognize electrical tools and test equipment and perform job planning and safety briefings
- Discuss electrical equipment maintenance requirements, switchgear and circuit breaker safety and motor control centers and industrial systems
- Recognize transformers and power distribution systems and carryout electrical safety auditing and compliance
- Employ incident investigation and root cause analysis, electrical safety program management and contractor electrical safety management
- Implement emergency response and electrical rescue and advanced electrical safety applications

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 electrical safety compliance for electrical engineers, electrical supervisors, maintenance engineers, reliability engineers, safety managers, HSE professionals, electrical inspectors, facility managers, operations supervisors, electrical contractors, personnel preparing for CESCP certification, those who are involved in the selection, commissioning, operation, maintenance, testing or troubleshooting of the generator excitation systems and AVR including engineers, supervisors and other technical staff.

Exam Eligibility & Structure

Exam candidates shall have the following minimum prerequisites:

A) All Candidates	
All CESCP Candidates (Regardless of Job function) must meet the following minimum requirements:-	Acceptable Documentation
• Attendance of Haward's EE0625 Course	• Certificate or proof of attendance/completion
• Holding a high school diploma or equivalent	• No documentation required

B) Electricians	
In addition to the minimum requirements found in Table A, all Electricians applying for entry into the CESCP program must meet ONE of the following:-	Acceptable Documentation
• Licensed electrician with 8,000 hrs (4 years) of verifiable work experience with electrical power systems	• Proof of Licensure **AND**, • Letter from supervisor (showing number of hours worked)
OR,	
• In lieu of licensure, must show proof of electrician job role and 8,000 hrs (4 years) of verifiable work experience with electrical power systems	• Copy of job description (signed by supervisor) **AND**, • Letter from supervisor (showing number of hours worked)

C) Electrical Engineers	
In addition to the minimum requirements found in Table A, all Electrical Engineers applying for entry into the CESCP program must meet ONE of the following:-	Acceptable Documentation
• Associate degree in electrical engineering from an accredited college or university with 8,000 hrs (4 years) of verifiable work experience with electrical power systems (field work)	• Proof of degree **AND**, • Letter from supervisor (showing number of hours worked)
OR,	
• Bachelor's degree (or higher) in electrical engineering from an accredited college or university with 4,000 hrs (2 years) of verifiable work experience with electrical power system (field work)	• Proof of degree **AND**, • Letter from supervisor (showing number of hours worked)
OR,	
• Licensed Registered Professional Electrical Engineer	• Proof of licensure

D) Non- Electrician/Electrical Engineer (Other) Candidates	
In addition to the minimum requirements found in Table A, all other candidates applying for entry into the CESCP program must meet ONE of the following:-	Acceptable Documentation
• Certified Safety Professional (CSP) with 6,000 hrs (3 years) of verifiable work experience with electrical power systems **OR,**	• Proof of CSP **AND,** • Letter from supervisor (showing number of hours worked)
• Bachelor's degree (or higher) in engineering, technology, or other related technical discipline from an accredited college or university with 6,000 hrs (3 years) of verifiable work experience with electrical power systems **OR,**	• Proof of degree **AND,** • Letter from supervisor (showing number of hours worked)
• Facilities/Plant/Factory safety professional with 20,000 hrs (10 years) of verifiable work experience with electrical power systems	• Copy of job description (signed by supervisor) **AND,** • Letter from supervisor (showing number of hours worked)

Training Methodology

Our courses employ an interactive, learner-centred methodology that integrates theoretical knowledge with practical application. The training is delivered through a suitable combination of some or all of the following methods, selected according to the course content and learning objectives:

- Instructor-led presentations and facilitated discussions
- Practical workshops and participant presentations
- Hands-on exercises and real-world case studies
- Equipment demonstrations and technical drawings
- Hardware- and software-based simulations
- Gamification & Role Play in soft-skills courses only
- Virtual Reality (VR) and Augmented Reality (AR)
- Instructional videos and other relevant training resources

This blended approach encourages active participation, strengthens practical skills and supports the effective application of acquired knowledge in the workplace.

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.

Accommodation

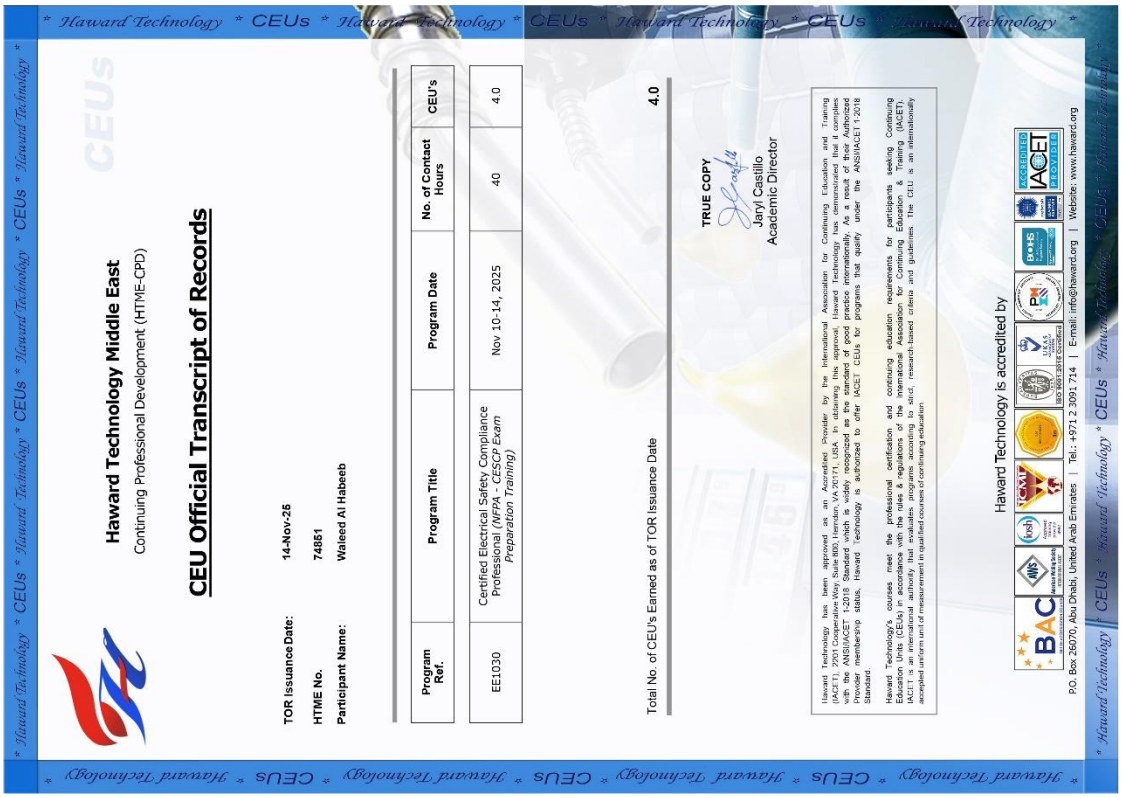
Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

CESCP Certificate(s)

(1) NFPA CESCP Foundation Certificates will be issued to participants who successfully passed the CESCP exam.



(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.



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 **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.

Training Fee

US$ 6,000 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 670 per Delegate + **VAT**.

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 **30 years** of extensive experience in **Power & Water Utilities** and Other **Energy Sectors**. His expertise includes **Electrical Safety**, **Certified Electrical Safety** (IEC, OSHA, **NFPA** & EN Standards), **NFPA 70E** Standard for 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/LV Electrical** Authorisation, Basic **Electricity**, **Electrical & Special Hazards**, **Personnel Protection**, **HV/LV Equipment**, **Motor Controllers**, **Electrical Switching** Practices, **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 of **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, **Athens 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** 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 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	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to CESCP Certification & NFPA Standards*** *CESCP Certification Objectives & Benefits • Examination Structure & Competency Requirements • Overview of NFPA Electrical Safety Standards • Relationship Between NFPA 70E, NFPA 70 (NEC), & OSHA Regulations*
0930 – 0945	*Break*
0945 – 1030	***Fundamentals of Electrical Hazards*** *Basic Electrical Theory for Safety Professionals • Current, Voltage, Resistance, & Energy Concepts • Human Body Response to Electrical Current • Common Causes of Electrical Incidents*
1030 – 1200	***Understanding Electrical Injuries & Accidents*** *Electric Shock & Electrocution Mechanisms • Arc Flash Hazards & Consequences • Arc Blast Effects & Pressure Hazards • Secondary Injuries from Electrical Incidents*
1200 – 1300	*Lunch*
1300 – 1400	***OSHA & Regulatory Compliance Requirements*** *OSHA Electrical Safety Regulations • Employer Duties Under OSHA General Duty Clause • Electrical Safety Compliance Obligations • Regulatory Enforcement & Penalties*
1400 – 1500	***Electrical Safety Program Fundamentals*** *Elements of an Effective Electrical Safety Program • Management Commitment & Leadership • Employee Involvement & Accountability • Documentation & Recordkeeping Requirements*
1500 – 1515	*Break*
1515 - 1650	***Roles & Responsibilities in Electrical Safety*** *Employer Responsibilities • Supervisor Responsibilities • Qualified Person Responsibilities • Contractor & Host Employer Responsibilities*
1650 – 1700	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1700	*End of Day One*

Day 2

0730 – 0930	***Electrical Hazard Identification*** *Shock Hazard Recognition • Arc Flash Hazard Identification • Arc Blast Hazard Assessment • Stored Energy Hazards*
0930 – 0945	*Break*
0945 – 1030	***Electrical Risk Assessment Procedures*** *Hazard Identification Methodology • Risk Estimation Techniques • Severity Assessment Criteria • Probability & Likelihood Determination*
1030 – 1200	***Shock Risk Assessment*** *Approach Boundary Requirements • Limited Approach Boundary • Restricted Approach Boundary • Shock Protection Methods*

1200 – 1300	*Lunch*
1300 – 1400	***Arc Flash Risk Assessment*** *Incident Energy Concepts • Arc Flash Boundary Calculations • Equipment Labeling Requirements • Arc Flash Study Fundamentals*
1400 – 1500	***Hierarchy of Risk Control Methods*** *Elimination Strategies • Substitution & Engineering Controls • Administrative Controls • Personal Protective Equipment (PPE)*
1500 – 1515	*Break*
1515 - 1650	***Electrical Hazard Analysis Workshop*** *Real-World Hazard Identification Exercises • Risk Ranking Methodologies • Hazard Mitigation Planning • Group Case Study Evaluations*
1650 – 1700	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1700	*End of Day Two*

Day 3

0730 – 0930	***Establishing an Electrically Safe Work Condition (ESWC)*** *Planning for De-Energization • Isolation of Electrical Sources • Lockout/Tagout Application • Verification of Absence of Voltage*
0930 – 0945	*Break*
0945 – 1030	***Lockout/Tagout (LOTO) Requirements*** *Energy Isolation Procedures • Group Lockout Systems • Temporary Removal of Lockout Devices • LOTO Program Auditing*
1030 – 1200	***Energized Electrical Work*** *Justification for Energized Work • Energized Electrical Work Permits • Risk Mitigation Requirements • Management Approval Processes*
1200 – 1300	*Lunch*
1300 – 1400	***Personal Protective Equipment (PPE)*** *Arc-Rated Clothing Selection • Voltage-Rated Gloves & Tools • Face Shields & Head Protection • PPE Inspection & Maintenance*
1400 – 1500	***Electrical Tools & Test Equipment*** *Selection of Electrical Test Instruments • Safe Meter Operation Practices • Insulated Hand Tools • Equipment Inspection Requirements*
1500 – 1515	*Break*
1515 - 1650	***Job Planning & Safety Briefings*** *Job Safety Planning Procedures • Conducting Job Briefings • Hazard Communication Techniques • Work Coordination & Supervision*
1650 – 1700	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1700	*End of Day Three*

Day 4

0730 – 1000	***Electrical Equipment Maintenance Requirements*** *Purpose of Preventive Maintenance • Maintenance-Related Safety Risks • Equipment Reliability Considerations • Maintenance Documentation Practices*
1000 – 1015	*Break*
0945 – 1030	***Switchgear & Circuit Breaker Safety*** *Switchgear Construction & Hazards • Circuit Breaker Maintenance Requirements • Inspection Procedures • Failure Modes & Risk Reduction*

1030 – 1200	***Motor Control Centers & Industrial Systems*** *MCC Safety Requirements • Inspection & Maintenance Practices • Operational Hazards • Safe Troubleshooting Techniques*
1200 – 1300	*Lunch*
1300 – 1400	***Transformers & Power Distribution Systems*** *Transformer Operating Principles • Inspection Requirements • Transformer Safety Hazards • Protection Systems & Controls*
1400 – 1500	***Electrical Safety Auditing & Compliance*** *Program Audit Requirements • Field Work Audits • Compliance Verification Techniques • Corrective Action Tracking*
1500 – 1515	*Break*
1515 - 1650	***Incident Investigation & Root Cause Analysis*** *Electrical Incident Reporting • Investigation Methodologies • Root Cause Determination • Lessons Learned & Corrective Actions*
1650 – 1700	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1700	*End of Day Four*

Day 5

0730 – 0930	***Electrical Safety Program Management*** *Program Development & Implementation • Safety Performance Indicators • Continuous Improvement Processes • Management Review Systems*
0930 – 0945	*Break*
0945 – 1200	***Contractor Electrical Safety Management*** *Contractor Qualification Requirements • Safety Orientation Programs • Performance Monitoring • Compliance Verification*
1200 – 1300	*Lunch*
1300 – 1400	***Emergency Response & Electrical Rescue*** *Emergency Preparedness Planning • Electrical Rescue Procedures • First Aid for Electrical Injuries • Incident Command & Communication*
1400 – 1500	***Advanced Electrical Safety Applications*** *Battery Energy Storage Systems • Capacitor Banks & Stored Energy • Renewable Energy Installations • High-Voltage System Considerations*
1500 – 1515	*Break*
1515 – 1615	***CESCP Examination Preparation Workshop*** *Review of Key NFPA 70E Concepts • Examination Question Analysis • Open-Book Examination Strategies • Time Management Techniques*
1615 – 1630	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1630 – 1645	***POST-TEST***
1645 – 1700	*Presentation of Course Certificates*
1700	*End of Course*

MOCK Exam

Upon the completion of the course, participants have to sit for a MOCK Examination similar to the exam of the Certification Body through Haward's Portal. Each participant will be given a username and password to log in Haward's Portal for the MOCK Exam during the 60 days following the course completion. Each participant has only one trial for the MOCK exam within this 60-day examination window. Hence, you have to prepare yourself very well before starting your MOCK exam as this exam is a simulation to the one of the Certification Body.

Practical Workshops Throughout the Course

Workshop 1: Electrical Hazard Recognition

- Hazard identification exercises
- Shock hazard assessment
- Arc flash exposure evaluation
- Incident case studies

Workshop 2: Risk Assessment and Control Selection

- Electrical risk assessment exercises
- Boundary determination practice
- PPE selection scenarios
- Risk mitigation planning

Workshop 3: Electrically Safe Work Condition

- Lockout/Tagout simulation
- Absence-of-voltage verification
- Isolation procedures
- Stored energy control

Workshop 4: Arc Flash Analysis

- Arc flash label interpretation
- Incident energy calculations
- PPE determination exercises
- Arc flash risk reduction methods

Workshop 5: CESCP Mock Exam

- Timed practice examination
- Exam strategy coaching
- Question interpretation techniques
- Final review session

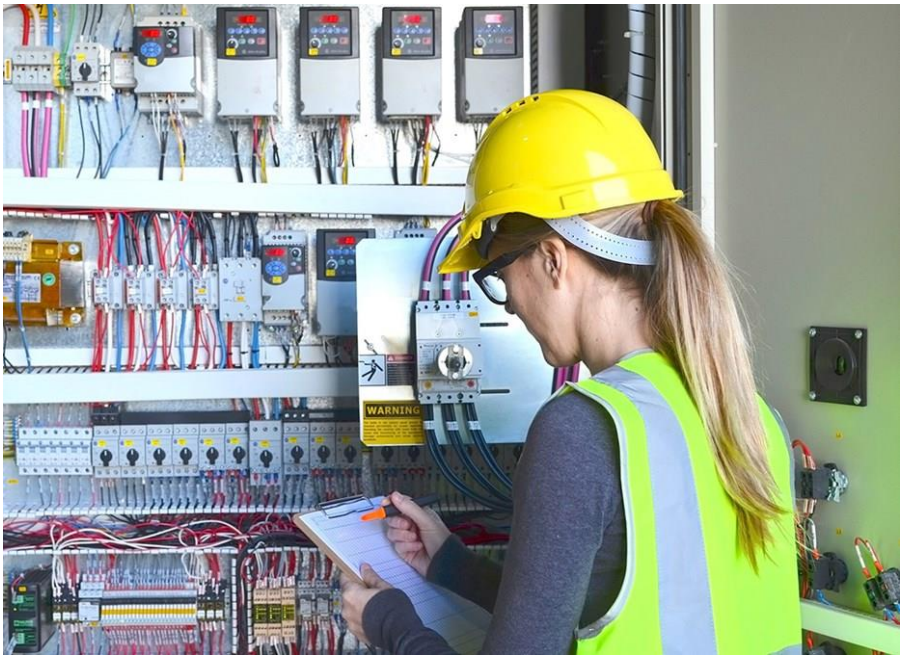
Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Apply NFPA 70E requirements to workplace electrical safety programs
- Identify and assess shock, arc flash and arc blast hazards
- Conduct electrical risk assessments and implement effective controls
- Establish and verify electrically safe work conditions
- Select appropriate PPE and protective measures
- Manage electrical safety compliance programs and audits
- Investigate electrical incidents and implement corrective actions
- Improve electrical equipment safety and maintenance practices
- Develop comprehensive electrical safety policies and procedures
- Successfully prepare for and attempt the NFPA CESCP certification examination

Practical Sessions

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



Course Coordinator

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