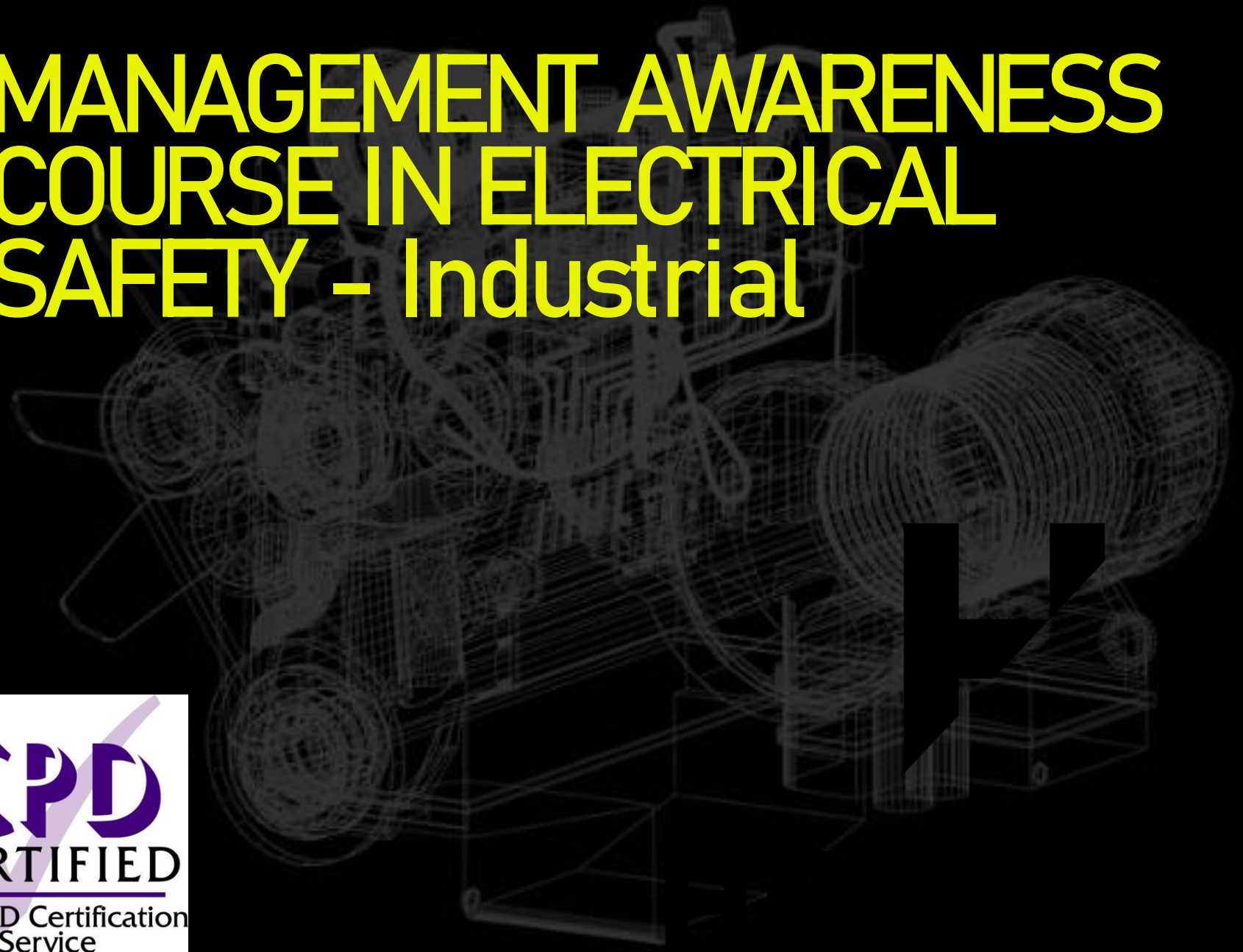
MANAGEMENT AWARENESS COURSE IN ELECTRICAL SAFETY - Industrial



HORIZON

CPD CERTIFIED
The CPD Certification Service

COURSE PURPOSE

- Electrical Training
- Facilities Management
- Carbon Management

- The purpose of this course is to provide an awareness of Electrical Safety to Managers and Supervisors working on Industrial, Construction, Commercial and Client Occupied Sites.
- The Modules within this course will cover:
  - The Dangers associated with Electricity.
  - The requirements for admittance into Substations and Switch rooms.
  - The Legislation governing workplace Health and Safety in the UK and the Duties which this legislation places on Employers, and Employees with particular emphasis on electrical safety.
  - Avoiding Danger from Overhead Powerlines.
  - Avoiding Danger from Underground Power Cables and Other Services.
- The Scope, Structure, Implementation and Management of Electrical Safety Rules to ensure compliance with UK Statutory Legislation and to prevent so far as is reasonably practicable, danger arising from working on or near electrical equipment and systems.

COURSE DELIVERY

- Electrical Training
- Facilities Management
- Carbon Management

Introduction

This course will be delivered over one day in accordance with the timetable set out below.

The content of each module will be delivered via a power point presentation supplemented with Tutor experiences to reinforce and emphasise learning.

Throughout the course delegates will be encouraged to ask questions and share their experiences.

At the end of the course delivery delegates will sit an open book Test based on the content of the Modules.

Course Timetable

- Registration - 8:00am to 8:30am.

  The course delivery will start at 8:30am and finish at 4:00pm.

  The course will be split up into four sessions.

- Session 1 – 8:30am to 10:30am.
  - Break 10:30am to 10:45am.
- Session 2 – 10:45am to 12:30 pm.
  - Lunch - 12:30pm to 1:00pm.
- Session 3 - 1:00pm to 2:30pm.
  - Break - 2:30pm to 2:45pm.
- Session 4 - 2:45pm to 4:00pm

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Facility Provision

- All modules will be taught in a training room and a simulated Substation area at the Horizon offices in Belfast.
- The training room is equipped with audio visual projection facilities, whiteboards and flipcharts.
- The simulated Substation is equipped with HV and LV Switchgear and has been arranged to replicate a typical substation as would be found in an industrial facility.
- Individual seating and desks will be provided for each delegate within the training room in accordance with current COVID 19 social distancing requirements.

Catering

- All catering will be provided by Horizon.

Course Materials

- Each delegate will be provided with the following:
- Course folder with presentation notes.
- Blank notepad and pen.
- The subject matter, learning objectives, and order in which the modules will be delivered is outlined in the following Course Agenda.

COURSE AGENDA

- Session 1- 8:30am to 10:30am

  Module 1- Dangers of Electricity -8:30am to 9:00am (approx. duration 30 minutes)

- Module Content
  - Introduction.
  - Electric Shock.
  - Electric Burns.
  - Electric Fires.
  - Arcing.
  - Explosion.

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COURSE AGENDA

Learning Objectives

At the end of this module Delegates will be able to understand and appreciate:

- What the definition of Danger is.
- What the principal Dangers associated with Electricity are.
- How these Dangers are caused and what effects they can have.
- Contribute to a classroom exercise on the measures which can be taken to reduce or eliminate these dangers.

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- **Session 1- 8:30am to 10:30am**

  Module 2- Admittance into Substations and Switchrooms - 9:00am to 9:30am.

  (approx. duration 30 minutes)

- **Module Content**
  - Introduction.
  - Substation Security.
  - Substation Posters and Signs.
  - First Aid and Treatment for Electric Shock.
  - Pre- Entry and Entry Checks.
  - Dangers and Hazards.

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COURSE AGENDA

Learning Objectives

At the end of this module Delegates will be able to understand and appreciate:

- The reasons why admittance to areas containing LIVE electrical apparatus needs to be controlled.
- Who may be permitted to enter these areas and under what conditions admittance can be permitted.
- The security measures which should be in place to control and prevent unauthorised entry.
- The Posters and Signs which should be displayed.
- First Aid and Treatment for Electric Shock measures which should be in place.
- The Pre-Entry and Entry Procedures and Checks which electrical Authorised Persons and Competent Persons should follow and carry out before entering and after they have entered these areas.
- The Hazards which can exist.

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Session 1- 8:30am to 10:30am

- Module 3- Legislation - 9:30am to 10:30 am
- (approx. duration 60 minutes)

Module Content

- Introduction.
- Health and Safety at Work (Northern Ireland) Order 1978.
- Health and Safety Regulations:
  - · Management of Health and Safety at Work Regulations (Northern Ireland) 2000.
  - · Provision and Use of Work Equipment Regulations (Northern Ireland) 1999.
  - · The Electrical Safety, Quality and Continuity Regulations (Northern Ireland) 2012.
  - · The Electricity at Work Regulations (Northern Ireland) 1991.

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COURSE AGENDA

Learning Objectives

At the end of this module Delegates will be able to understand and appreciate:

- The origin of Health and Safety Legislation.
- In relation to the Health and Safety at Work (Northern Ireland) Order 1978:
  - Where it applies.
  - The purpose and powers of the Health and Safety Executive set up under the Order.
  - The Duties/Responsibilities placed on Employers and Employees and the meaning of the term *"so far as reasonably practicable"* which is used to qualify those duties/responsibilities.
- How Health and Safety Regulations come into force.
- In relation to the Management of Electrical Safety a synopsis of the following regulations including the duties/responsibilities these regulations place on Employers and Employees:
  - Management of Health and Safety at Work Regulations (Northern Ireland) 2000.
  - Provision and Use of Work Equipment Regulations (Northern Ireland) 1999.
  - The Electrical Safety, Quality and Continuity Regulations (Northern Ireland) 2012.
  - The Electricity at Work Regulations (Northern Ireland) 1991.

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Session 2- 10:45am to 12:30pm

Module 4 - Avoiding Danger from Overhead Powerlines – 10:45am to 11:45am.

(approx. duration 60 minutes)

Module Content

- Introduction.
- Overhead Power Line Types.
- Risk Control Measures.
- Emergency Procedure.
- Extracts from ENA Guidance Documents.

- Electrical Training
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Learning Objectives

At the end of this module Delegates will be able to understand and appreciate:

- The purpose, type and construction of overhead power lines which are used to transmit and distribute electrical energy.
- The dangers and consequences of contacting or coming too close to an overhead power line.
- The Risk control measures which need to be put in place when work is to be carried out near overhead power lines, to include:
  - · Consultation with overhead line owners.
  - · Development of suitable Methods Statements.
  - · Assessment of the Competency, Training, Instruction, and Supervision measures which will need to be put in place.
  - · The Safety Zones and Barriers which need to be established including the precautions which need to be taken to prevent contact with an overhead power line.
- The Emergency Procedure which needs to be followed in the event of a person, vehicle or item of machinery makes contact with an overhead line.
- A summary of the guidance available from the Electrical Networks Association in relation to overhead lines.

COURSE AGENDA

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Session 2- 10:45am to 12:30pm

Module 5 - Avoiding Danger from Underground Power Cables and Other Services- 11:45am to 12:30pm

(approx. duration 45 minutes)

Module Content

- Introduction.
- The Dangers
- Safe System of Working

- Electrical Training
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Learning Objectives

At the end of this module Delegates will be able to understand and appreciate:

- The types of work activities where underground power cables and services can be encountered.
- The types of services which can be encountered.
- The consequences of making contact with any underground service.
- The Dangers associated with working near live underground power cables.
- The importance of establishing a Safe System of Work to include:
  - Planning of the work activities, including consultation with services owners and obtaining information on cable and service routes and their status.
  - Detection, identification and marking of cable and service routes, including collation of information and site investigations.
  - Safe Digging practices, and what that entails. .
- The Emergency Procedure which needs to be followed in the event of a person, vehicle or item of machinery makes contact with an underground power cable.

COURSE AGENDA

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Session 3- 1:00pm to 2:30pm

Module 6- Electrical Safety Rules – 1:00pm to 2:00pm

(approx. duration 60 minutes)

Module Content

- Introduction.
- Scope.
- Roles, Responsibilities and Duties.
- Typical Organisational Chart.
- Safe Working Practices and Work on Particular Items of Electrical Apparatus.
- Documentation and Records.
- Typical Implementation Plan.

COURSE AGENDA

- Electrical Training
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Learning Objectives

At the end of this module Delegates will be able to understand and appreciate:

- The reasons why Electrical Safety Rules are written.
- The Scope of work which these Rules should encompass.
- The Roles which need to be in place to establish a competent management structure to maintain compliance with all relevant statutory requirements, including the Responsibilities and Duties attached to each role.
- The safe working practices and procedures which need to be in place to establish a safe system of working.
- The documentation and records which are required to provide evidence of the procedures which have been followed and to prove that the operation of the Electrical Safety Rules is effective.
- How Electrical Safety Rules could be implemented on projects with particular emphasis on establishing the competency and monitoring the performance of any Electrical contracting organisation who provide services.
- How Electrical Safety Rules could be implemented on Client occupied sites with particular emphasis on the establishment of written interface arrangements, defined responsibilities and lines of communication between all parties.

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Session 3- 1:00pm to 2:30pm -

- Summary, Wrap-Up and Closure- 2:00pm to 2:30pm
- (approx. duration 30 minutes)

Session 4- 2:45pm to 4:00pm

- Open book Test.