

# Workshop on Electrical Safety: Hazards and Protective Measures

April 25 – 29, 2022, 1<sup>st</sup> Run: Lagos & Port Harcourt October 10 – 14, 2022, 2<sup>nd</sup> Run: Lagos & Abuja

For Tutor -Led Class: 9am – 4:30pm **Workshop fee**: N200, 000 per Participant For online: Delivery via Zoom Time: 9am – 4:00pm everyday

Online course fee: N180, 000 per Participant Available for In-plant Training U\$D Equivalent for foreign
Participants

#### **Program Overview:**

Electrical hazards can result in serious injuries or death for personnel that work on or around electrical equipment. In Fact, electrocutions rank fourth in causes of industrial fatalities. In order to ensure a safe workplace, personnel must understand electrical safety regulations, electrical hazards, and the use of safe work procedures and protective equipment.

This course focuses on international safety requirements, including OSHA standards, and provides information on the steps needed for the prevention of electrical injuries to individuals tasked with the operation and maintenance of electrical equipment.

#### For Whom:

This course is designed for professionals managing and supervising personnel involved in the maintenance and repair of electrical equipment, such as field supervisors, safety professionals, site managers, lead technicians, maintenance engineers and maintenance supervisors.

### **Learning Objectives:**

At the end of the program, participants will be able to:

- Minimize risks by identifying the hazards associated with electrical energy and by complying to safety guidelines
- Enhance safety by understanding the difference between low, medium, and high voltage and by adopting the relevant safety rules accordingly
- Apply the inspection requirements when working with or on electrical equipment to avoid equipment damage and possible injuries to personnel
- Follow inspection requirements for Personal Protective Equipment (PPE) and reduce injuries by identifying defective PPE
- Describe and apply the requirements in EN 500110, the most widely used standard for the protection of individuals from the effects of electrical hazards

#### **Course Outline:**

## Day 1: Electrical hazards

- Electrical terminology
- Resistance
- Voltage
- Current
- Conductor
- Insulator
- Grounding
- Protective earthing
- Bonding

#### Day 2: Electric shock: Definition, Causes and Effect

- Electric shock defined
- How it occurs
- Effect on the human
- Rescue methods
- Arc flash
- Arc flash defined
- How it occurs
- Effect on the human
- Rescue methods

## Day 3: Equipment hazards associated with electric shock

- Equipment hazards
- Inadequate wiring hazards
- Overload hazards
- Flexible cords
- Inadequate protective earthing
- Protective devices
- Fuses
- Circuit breakers
- Ground fault circuit interrupters
- Equipment engineering for shock protection
- Boundaries for shock protection
- Personal Protective Equipment for shock protection

### Day 4: Arc flash protective measures

- Equipment engineering for arc flash protection
- Arc flash boundaries
- Personal Protective Equipment (PPE) for arc flash protection
- Determining what hazards are involved

## Day 5: Risk identification and Mitigation Measures

- Identifying the risks involved
- Developing measures to reduce the risks
- Implementing the measures
- Documenting the process
- Reviewing process

#### LOCATIONS

- 1 HCA Learning Centre. Acme House 2nd Floor, 23, Acme Road, Ogba, Industrial Scheme, Ikeja, Lagos, Nigeria
- 2 Green-Minds Hotel, Plot 764, Cadastral Zone B05,
- E. Ekukinam Street, Utako District, Abuja
- 3 Pakiri Hotel, 4 Okwuruola Street, Off Stadium Road, Rumuola, Port Harcourt

Open Course Fee: N250, 000 In-plant Fee Negotiable

## WORKSHOP FEE:

#### N200, 000 per participant, VAT -N15, 000

Note: this covers Workshop Fee, Tea/coffee break, Lunch, course materials and certificate of attendance.

Payment should be made into our Accounts:

Account Name:

Human Capital Associates Global Consult Ltd. Union Bank of Nig. PLC: Account No: 0097961537 First Bank of Nig. PLC: Account No: 2033683960 Keystone Bank Ltd.: Account No: 1007150325

For Booking / Enquiry, Call: 234-8145745664, 234-8184727337 24/7 Lines: 234-8068933608, 234-8029170491 & 234-8051365946

## **Training Methodology**

Lectures, discussions, exercises, and case studies will be used to reinforce these teaching/learning methods.