

### Workshop on Effective HVAC Maintenance and Troubleshooting

March 4 – 8, 2024, 1<sup>st</sup> Run: Lagos & Port Harcourt September 2 – 6, 2024, 2<sup>nd</sup> Run: Lagos & Abuja

For Tutor -Led Class: 9am – 4:30pm Workshop fee: N300, 000 per Participant For online: Delivery via Zoom Online course fee: N250, 000 per Participant Available for In-plant Training

600 U\$D for foreign Participants

# Program overview:

This program is designed specifically to expand participants' knowledge and improve their skills in the installation, repair, maintenance and servicing of heating, ventilating, and air conditioning systems. This course focuses on maintenance and troubleshooting of HVAC systems, this include the principle of refrigeration cycles, refrigeration cycle components, and different types of HVAC systems, special tools and instruments for HVAC technicians, servicing of refrigeration cycle, diagnosis and repairs, inspection and maintenance of HVAC systems, and testing and troubleshooting of HVAC components. The course also covers all aspects of HVAC operation, maintenance and troubleshooting principles for systems used in industrial environment and participants will be able to apply and implement maintenance programs in their organizations as they return to work.

#### For Whom:

The program is designed for Engineers, Supervisors, Foremen and Technicians working in operations and maintenance of HVAC and their accessories to ensure HVAC facilities availability.

# Learning objectives:

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

- explain the principles of refrigeration cycle;
- explain the concept and the principle of Air-Conditioning;
- list the tools and equipment required for HVAC maintenance and operations work;
- explain the technology behind replacement refrigerant;
- explain heat transmission and measurement;
- describe the procedures for laying out, supporting, and testing piping systems;
- learn how to service refrigeration cycle;
- explain electrical circuit protection of HVAC;
- apply HVAC diagnosis and repairs;
- handle troubleshooting and fault-finding procedures;
- discuss the fundamentals of refrigeration and identify refrigeration tools and materials; and
- install and service different types of refrigeration and air conditioning systems.

### **Course outline:**

### Day 1:

- Introduction to HVAC and refrigeration equipment
- Components and spares quality control and sourcing
- Maintenance procedures and work methods

## Day 2:

- Common faults & diagnostics
  - o Troubleshooting & Fault Finding Procedures
- Principles of AC refrigeration cycle
- Replacement refrigerant and ozone depletion

## Day 3:

- Tools and equipment for maintenance
- Servicing of refrigeration cycle
- Servicing and repairs HVAC systems and components

## Day 4:

- Electrical circuit protection of HVAC
- Inspection and maintenance of HVAC components and system
- Testing and troubleshooting of HVAC components

### Day 5:

- HVAC Maintenance Implementation Process
- Use of Contractors and Spares
- Health and Safety in HVAC maintenance work

#### 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 Ltd., 4 Okwuruola Street, off Stadium Road, Rumuola, Port Harcourt, Rivers State.

Open Course Fee: N300, 000 In-plant Fee Negotiable

#### **WORKSHOP FEE:**

#### N300, 000 per participant, VAT -N22, 500

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: 234-8051365946, 234-7087578814 24/7 Lines: 234-8068933608, 234-8029170491, 234-8145745664, & 234-9112830607

# **Training Methodology**

Lectures, discussions, exercises, case studies, audio-visual aids will be used to reinforce these teaching/learning methods.