



**Asia Masters Center**

# Maintenance of Uninterruptible Power Supply (UPS) Systems



## Maintenance of Uninterruptible Power Supply (UPS) Systems

### Course Objective

- Define the roles of the roles of an uninterruptible power supply with regards to the types of loads it should protect
- Understand the different types and construction of batteries installed in an uninterruptible power supply
- To appreciate the merits of the fully automated battery monitoring system
- Identify the components in the uninterruptible power supply
- Understand the functionalities and operations of each component of the uninterruptible power supply
- Competence to perform maintenance by switching on to the bypass mode
- Be able to interpret the alarms and execute troubleshooting techniques
- To identify the particular type of uninterruptible power supply unit installed at your premises

### Target Audience

- Electrical engineers
- Maintenance technicians
- Management professionals

- Project engineers



## Course Outline

### **Fundamentals of Uninterruptible Power Supply**

- Uninterruptible power system concepts and resilient systems
- Single input and double input uninterruptible power systems
- Merits of installing an uninterruptible power system
- Power quality issues and outages
- Simple uninterruptible power system designs
- Uninterruptible power supply system verses standby diesel generators

### **Types and Construction of Batteries and Battery Chargers**

- Different types of battery technologies and characteristics
- Construction and characteristics of lead acid batteries
- Construction and characteristics of nickel cadmium batteries
- Care of batteries
- Battery monitoring systems
- Types, construction and characteristics of battery chargers

### **Characteristics and Functionalities of Various Uninterruptible Supply Systems**

- The online and offline uninterruptible power systems
- Uninterruptible power supply components and functionalities of filters
- Double conversion uninterruptible power systems
- Transformer base and transformer-less uninterruptible power systems

- Uninterruptible power systems operation modes
- Parallel systems and redundancy

### **Construction and Operation of the Diesel Rotary Uninterruptible Power System**

- Concept of the diesel rotary uninterruptible power system or DRUPS
- Construction of DRUPS
- Operation of DRUPS
- Types and characteristics of DRUPS
- Merits of DRUPS
- Challenges facing DRUPS

### **Installation, Applications, Protection and Maintenance of Uninterruptible Power Systems**

- Safety and care of uninterruptible power systems
- Importance of battery and uninterruptible power systems maintenance
- Uninterruptible power system protection
- Troubleshooting uninterruptible power systems
- Condition monitoring of uninterruptible power systems
- Case studies, selection and design
- Q&A and wrap up session

## ➤ **The Feature Of Asia Master Training And Development Center**

- we pick up the customer from the airport to the hotel.
- we give the participant training bag includes all the necessary tools for the course.
- Working within groups to achieve the best results.
- All our courses are confirmed and we do not postpone or cancel the courses regardless of the number of participants in the course.
- We can assist you in booking hotels at discounted prices if you wish to book through us.
- We offer the certificate from Asia Masters Center for Training and Administrative Development.

## ➔ **The Cost Of The Training Program Includes The Following:**

- 1) Scientific article on flash memory.
- 2) Training Room.
- 3) Training.
- 4) Coffee break.
- 5) The training bag includes all the tools for the course.

## ➔ **Course schedule**

- 1) Pick up & drop from the Airport
- 2) The training hours daily 6 hours
- 3) Theoretical and practical training as needed
- 4) Professional trainer from Malaysian Petroleum Company (Petronas) and other trainers.



## Asia Masters Center

### Price (USD)

➤ 12000 \$ PER PERCIPANTE

### The details of the bank account

**Bank name: CIMB Bank Berhad**

**Account name: Asia Masters Center SDN. BHD**

**Bank account number: 80-0733590-5**

**Swift code: CIBBMYKL**

**IBAN: Null**