

Data Centre Operation and Maintenance for Engineers and Managers

CONNECTION TECHNOLOGY 裝備未來
FUTURE SKILLS

Course Highlights

- A practical workshop introducing modern data centre's operation and maintenance strategies through case studies and experience sharing
- 6 hours CPD accredited by the Institution of Data Centre Engineers (IDCE)
- Certificate holders fulfilled relevant requirements are eligible to apply for Member of the Institution of Data Centre Engineers (MIDCE)

Programme code

10014352-11

Date and time

4 Dec 2023 (Mon)
9:30 - 17:00

Venue

1/F, HKPC Building,
78 Tat Chee Avenue, Kowloon,
Hong Kong

Language

Cantonese (supplemented by
English and with English
handouts)

Course fee

HK\$2,300
HK\$2,070*
*Group enrolment of 2 people
or above; OR
Enrolment on or before
20 Nov 2023; OR
Members of Co-organiser/
members of supporting
organisation

Introduction

A data centre is designed to provide uninterrupted infrastructure services for data processing operations. It consolidates information technology resources to enable computerised services, applications and transactions.

Many IT professionals and facility managers are challenged with enhancing data centre performance while saving the maintenance and operation costs.

Realising the importance of the profession, Hong Kong Productivity Council and the Institution of Data Centre Engineers jointly organised this course to further explore plant operation management and M&E topics of data centres.

Objectives

- Know how to respond to emergencies such as power outage and cooling failure.
- Understand the operation of Uninterruptible Power Supplies (UPS) and Computer Room Air Conditioner (CRAC) systems, and other Mechanical & Electrical (M&E) plants.
- Learn and apply maintenance strategies.
- Know how to resolve complex system breakdowns.
- Ensure the working order of maintenance in computer rooms

Who should attend

This course is designed for:

- Engineers, managers and contractors who are responsible for highly critical systems like UPS and CRAC systems, etc. in data centre.
- Data Centre engineers and managers from the industries of banking, financial investment, IT.

Advisory Board

Board Director

Dr C M KWAN - *The Chairman & Chief Assessor of Institution of Data Centre Engineers*
BScEng(Hons), DBA, CEng, FCIBSE, FHKIFE, FIDCE

Executive Board Member

Mr Wallace CHAN

BEng, MBA, MSc, FHKIConstE, MIEE

Course Content

<p><i>1. Emergency Operation and Response</i></p>	<p><i>8. Common Breakdowns and Resolutions</i></p>
<p>Emergency response, emergency crisis management, emergency power supply schematics</p>	<p>Common power and UPS power failure, genset power failure, CRAC breakdowns, no cooling water from building, no condenser water from building, AC unit break down, temperatures too high or too low, Very Early Smoke Detection Apparatus (VESDA) system problem, sprinkle system, FM 200 and other fire system problem, water leak, lighting and power failures, system under floor and above ceiling, plant breakdown statistics, dilapidation survey</p>
<p><i>2. M&E Plant in General</i></p>	<p><i>9. Office Area Maintenance</i></p>
<p>Basic M&E plant systems and typical communication room systems, business premises selection checklist, M&E Planned Preventative Maintenance (PPM) programme</p>	<p>Building services, HVAC works, fire services, plumbing and drainage, lighting & power, builders work, decoration works, architectural works, structural works</p>
<p><i>3. Mission Critical Systems</i></p>	<p><i>10. Preventive Maintenance</i></p>
<p>UPS Systems, CRACs, CRAHs, fire suppression system, essential power systems, fire detection system, sump tanks systems</p>	<p>Critical alarms, plant monthly report checklist samples, report examinations and interpretations, breakdowns prevention</p>
<p><i>4. Maintenance Management</i></p>	<p><i>11. Special Topic 1 - CRAC Systems</i></p>
<p>Type of maintenance, different applications and maintenance policy, various plant systems inside coms room, preventive maintenance schedules, nude site survey</p>	<p>Cooling methods, air-cooled plant schematics, water cooled or air cooled, cooling towers, chilled water cooled, chilled schematics, CRAC construction, CRAC operations, CRAC maintenance checklist, routine checking, CRAC PPM</p>
<p><i>5. Individual Plant in Details</i></p>	<p><i>12. Special Topic 2 - UPS system</i></p>
<p>Coms room equipment, different equipment design layouts and their pros and cons, DC plant audit checklist</p>	<p>UPS function, how it provides power, UPS construction, UPS operation, operating principle, UPS setting, common Q&A on UPS, UTI Tier System revisit, UPS configurations</p>
<p><i>6. Operation & Maintenance Strategy</i></p>	<p><i>New Additions</i></p>
<p>Maintenance strategy, criteria of good maintenance, Up Time Institute Tier system, maintenance principles, data centre maintenance strategy, data centre environmental conditions, energy audit for data centre, energy saving list sample, 5-year life cycle plan, critical M&E system re-engineering</p>	<p>Coordination and Communication, DC Documentations, Business Continuity Planning (BCP) & Drills, Energy & Efficiencies, Environmental, Health and Safety (EHS), Problem Diagnosis, Support & Outsourcing, Training, Vendor Management, New ups & CRAC equipment, etc.</p>
<p><i>7. Individual Plant in Details</i></p>	
<p>Heating, Ventilation, and Air Conditioning (HVAC) systems, lighting & power, plumbing & drainage, fire systems revisit, M&E Handover documentation, vendor performance evaluation</p>	

Course Details

Methods of Teaching	Lectures with class exercises, case studies, experience sharing and/or videos etc.
Speaker(s)	All instructor(s) are Chartered Engineer (CEng) or have obtained a Bachelor's Degree in a relevant engineering discipline with over 20 years of relevant working experience.
Award of Certificate	Participants who have attended the course will be awarded a Certificate of Attendance by HKPC and IDCE.
Recognition of Certificate	The course is accredited by the Institution of Data Centre Engineers (IDCE) . Holder of this Certificate of Attendance will be recognised to have possessed the Professional Development Record (equivalent to Continuing Professional Development Record) of IDCE and fulfilled the academic requirement to apply for member of IDCE (MIDCE), provided that they have sufficient work experience.

Enrolment methods

1. Scan the QR code to complete the enrolment and payment online; OR
2. Mail the crossed cheque with payee name "Hong Kong Productivity Council" (in HK dollar) and the application form to HKPC Academy, Hong Kong Productivity Council, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon (attention to Ms Fannie KWOK).
Please indicate the course name and course code on the **back of the cheque and envelope**.



[Enrolment Link](#)

Supporting Organisations

