Data Centres – Introduction to M&E Services

Overview

This course provides an introduction to the data centre industry with particular emphasis on power and cooling systems. These latter topics are covered as specialist individual CPD courses by WOOD COMMUNICATIONS / ITEX Training.

Course Aim

The aim of this course is to give mechanical and electrical engineers a good understanding of the data centre industry and in particular to provide an introduction to the design of the power and cooling systems

Learning Objectives:

At the end of the course attendees will have a good understanding of the following:

- Types of Data Centres, Tier classification etc.
- Critical Systems and Redundancy
- Power systems
- Cooling Systems
- Fire, Security and Building Management Systems

Programme

Part 1 – Types of Data Centres

- Colocation – CoLo / Wholesale DCs
- Hyper Scale / Enterprise DCs
- Small Scale - Private & Edge DCs
- Understanding Resilience, Reliability, Redundancy
- DC Tier Classification
- Layout of Typical Data Centres

Part 2 – Energy Usage and efficiency in DCs

- Energy efficiency metrics
- Energy usage
- Improving energy efficiency in existing DCs

Part 3 – Power Systems

- MV and main LV Distribution Typical configurations
- Generator Systems
- UPS systems

Part 4 – Cooling Systems

- The need for cooling
- Environmental Classes of IT Equipment
- Chilled Water CRACs
- Air and Water Cooled DX CRACs
- Pumped DX CRACs
- Direct and indirect Adiabatic Cooling
- Air management issues
- Hot and cold aisle containment

Part 5 – Fire, Security and Building Management Systems

- Fire Suppression Systems
- Security Systems – Intruder, Access Control and CCTV
- Building Management Systems

Who Should Attend

This course will benefit mechanical and electrical engineers and contractors involved in the supply chain for data centres and other mission critical projects. It is also an ideal introductory course for anyone wishing to attend other CPD courses by WOOD COMMUNICATIONS / ITEX Training in relation to power and cooling systems for mission critical projects

Duration:

1 day – 7 Hours

Cost: €375.00 per person

Trainer Profile:

Brendan Dervan is a Chartered Engineer with over 40 years' experience in all aspects of mechanical and electrical building services including; design, installation, commissioning and maintenance. After completing an electrical apprenticeship in 1982 he went on to study electrical engineering in DIT.

He has worked in M&E consultancy at senior engineer / director level since 1990. In 1999 he started his own M&E consultancy, Dervan Engineering Consultants (DEC), which merged with Cundall in 2016. His Company provided M&E consultancy and project management services to a diverse range of clients in both the public and private sectors. In 2013, Brendan completed an MSc in Energy Management with TU Dublin. His thesis researched the improvement of energy efficiency in existing data centres.

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- Low Voltage Distribution Design
- Medium Voltage Distribution Design
- Standby Generators
- UPS Systems
- Building Energy Management Systems
- Role of the M&E Consultant