

Data Centre Design

The design of a data centre facility and computer rooms brings together various trades and specialties. The course also focuses on the Project Management skills necessary to design and manage a data centre. Case studies will be completed to give the students hands on experience in designing a data centre.





Course overview

Best practice

The Quintica Data Centre Design Course is designed around best practices for the design, construction and management of data centre facilities and computer rooms. It incorporates the relevant standards to ensure compliance to local and international codes and focuses on the interdependencies between the various components of the data center environment.

- Basic cost models for building data centres
- Understanding the Tier levels
- Reliability models
- Relevant standards
- Estimating the size of the rooms in the facility
- Location and requirements of the facility
- Health and safety issues
- Raised floor systems
- Rack and cabinet layouts for cooling requirements
- Internal cabinet layout
- Air conditioning
- Heat load calculation and air conditioning specification
- Different cooling options
- Basic power theory
- Peak load and average power load calculation
- Sizing of the UPS and the various options
- Generator sizing
- Earthing and bonding
- The signal reference grid
- Low risk fire cabling
- Fire detection and suppression
- Structured cabling in the data centre facility – copper and fiber
- Cable reticulation and tray design
- Building Management Systems

The Course is about 70% theory and 30% exercise

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Who Should Attend

Facility Managers, Project Managers, IT Managers, Consultants and Designers

Prerequisites

Basic IT knowledge

Building your career

Global standards

The Course is based on the following global standards:

- TIA 942 Telecommunications Infrastructure Standard for Data Centers
- VDI 2054 Air conditioning for computer areas
- EN 50173-5: IT Generic Cabling for Data Centres
- EN 50174-2 (2000) Information technology – Cabling installation – Part 2: Installation & planning practices inside buildings,
- EN 12825:2001 Raised access floors
- EN 50310 – Bonding & Earthing in Buildings with IT equipment
- EN 60950-1:2002, Information technology equipment-Safety - General requirements
- ISO 14520-1:2006 Gaseous fire-extinguishing systems. Physical properties & system design. General requirements
- ISO 11801:2001 IT Generic Cabling
- EU Directive on Energy Performance in Buildings
- EU Energy Services Directive
- EU Construction Products Directive
- EU Code of Conduct on Data Centres
- Disability Discrimination Act (UK), Americans with Disabilities Act (USA)
- Fire Regulatory Reform Order Act (UK)
- Electricity at Work Act (UK)
- The Building Regulations (UK)
- ASHRAE Thermal Guidelines for Data Processing Environments
- CIBSE Guide B. Heating, ventilation, air conditioning and refrigeration
- CIBSE Guide F. Energy efficiency in buildings
- BS 6266:2002 Code of practice for fire protection for electronic equipment installations
- BS 7671 (IEE 17th Edition) – Requirements for Electrical Installations
- BS 6701 – Telecommunications Equipment and cabling

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