



Kannegieter College provides the most relevant and real life Data Centre courses available in Europe. On this course, Technicians will gain a comprehensive understanding of every aspect of the Data Centre and its operations to help them carry out work in the Data Centre effectively and with minimal risk.

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The skill and knowledge of today's Data Centre Technicians have a major impact on the smooth running of a Data Centre facility. With a thorough understanding of the physical infrastructure, issues can be identified and faults can be rectified quickly. In many cases, they can be prevented altogether.



#### Who should take this course

Students will probably be working in a data centre or have a desire to work in one.

#### Prerequisites

There are no formal prerequisites for the course.

### What will you learn?

This comprehensive data centre technician course is designed to give technicians a comprehensive understanding of every aspect of the data centre and its operations including;

- What Data Centres do and the Different Types
- Understanding the 4 most important factors: Power, Cooling, Cabling, Premises
- Standards, Certification and Compliance
- The Physical Infrastructure in detail
- Key Operational Information and Parameters
- Important Processes and Procedures and the Technicians role within them
- What to Maintain, How and When
- Key Considerations When Installing new Equipment (IT and Infrastructure)

#### Course content

- Introduction to data centres
  - What is a Data Centre
  - Data centres vs computer rooms
  - Different types of data centre
  - The international data centre standards
  - Understanding Fundamental Design Principles
  - Certification
  - Compliance issues
  - Codes, Regulation and Best Practice
  - Understanding resilience models N, N+1, 2N, Tiers/Ratings/Classes etc.
  - Building requirements
  - Management Organisation
  - The roles of IT and Facilities
- The Infrastructure IT Systems and their correct installation

Understanding Efficiency Settings in IT Equipment

- Servers, Storage, Networking, IT Security
- Understanding Equipment Specifications
- How to Install Equipment Correctly
- Improving Airflow around IT Equipment

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DCT | Certified Data Centre Technician Course



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## **Course content**

- Spaces and places
  - Understanding Location Issues
  - How location can reduce capacity
  - Different spaces in a data centre and their functions
- Raised access floors
  - Understanding floor strength
  - Standards
  - Correct sealing
  - Understanding the importance of floor heights
- Racks and computer room layouts
  - Hot and cold aisle concept
  - 7 and 8 tile pitch models
  - Server and communications racks
  - 2 and 4 post designs
- Power
  - Overview of power systems
  - Electrical Infrastructure components and paths
  - Power, kW and kVA
  - Power factor issues
  - Single v 3 phase distribution
  - Rating, Tier and Class 1-4 models
  - Backup Power Options: Generators and UPS
  - Looking after batteries and UPS
  - Power Distribution units
  - Earthing, grounding and bonding
  - Monitoring, Measurement and Periodic Testing
- Cooling
  - Air conditioning and cooling principles
  - Why we need cooling
  - Available technologies and how they work
  - Hot and cold aisle layouts and variations
  - The Importance of Airflow
  - DX v central water chiller options
  - ASHRAE, TIA and CIBSE requirements
  - Problems Caused by Low humidity
  - Ventilation and filtration requirements
  - Energy saving techniques e.g. dry cooler, air economiser, water economiser
  - International Differences: kW v tons v BTU of cooling
  - Hot aisle/cold aisle options
  - Enclosed cold and hot aisles
  - Other rack cooling options
  - Side to side cooling for large Cisco switches
  - Water cooled racks
  - CO2 cooled racks
  - Spot cooling
  - Rating, Tiering, Class requirements
  - Monitoring, Measurement and Period Testing
  - Efficiency Metrics

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## Course content

- Cabling
  - Cabling Solutions. Getting it right
  - Organising telecommunications rooms
  - Looking after the cables and containment
- Key Operational Parameters
  - Optimum running conditions
  - Understanding the limitations
- Processes and the Technicians role
  - Types of maintenance, Reactive, Preventative, Predictive
  - Checklists
  - Organising, recording maintenance and stock
  - What Infrastructure needs maintenance. What is needed and how often
  - Keeping it clean and general housekeeping
  - Monitoring
  - Using BMS and DCIM
  - Incident Management
  - Change Management
  - Change Approval
  - Permits to work
  - Risk Assessments and Method Statements
  - Acceptance of work
  - Asset and Configuration management
  - Keeping an asset register
  - Labelling and Documentation
  - Updating records and drawings

## Get certified

If you complete this course and pass the exam you will be awarded a certificate and the right to use the DCT logo and the DCT designation after your name whilst your certificate is valid.

## Praktische informatie



