Certified Data Centre Specialist (CDCS)

Category: Infrastructure & IT Operations | **Vendor:** EPI

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

The course will bring participants to the level of a suitable sparring partner with suppliers. They will be able to verify offers provided by vendors for correctness, effectiveness and efficiency.

About This Course

The course will bring participants to the level of a suitable sparring partner with suppliers. They will be able to verify offers provided by vendors for correctness, effectiveness and efficiency.

Who Should Attend

The primary audience for this course is an IT, facilities or data centre operations professional working in and around the data centre and having the responsibility to achieve and improve high-availability and manageability of the data centre.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

After completion of the course the participant will be able to: Understand the design life cycle of data centres and the stages involved Discuss the data centre requirements in great level of detail with vendors, suppliers and contractors to ensure that these requirements are met Validate design plans, quotes and offers proposed by vendors/contractors' Understand redundancy levels for both the data centre design/setup and maintenance Understand the various building considerations such as bullet proofing, mitigation of seismic activity, fire ratings and thermal stability Understand how to install a raised floor that meets requirements, avoiding misalignment, level differences and leakage Understand how to read a Single Line Electrical Diagram to identify and avoid the most common design issues' Choose the correct UPS and parallel configuration, learn and avoid classic parallel installation mistakes' Understand how to calculate battery banks, validate offered configurations to ensure they meet requirements' Understand what distance to keep to avoid EMF issues for human safety and equipment disturbances' Understand the fundamental cooling setup, CFM, Delta-T and other important factors' Understand contamination factors and limitations' Understand full details of fire suppression options, how to calculate gas content and verify installations' Understand how to measure data centre energy efficiency and how to improve it

Detailed Course Outline

Data Centre Design/Life Cycle Overview

- Overview of the phases of a data centre life cycle

  Planning, re-alignment and continuous improvement

Standards and Rating Level Definitions

- Rating level history

  Difference between Uptime and TIA-942

  Rating level definitions

  Redundancy options (N+1), 2N, 2(N+1)

  Concurrent Maintainability/Compartmentalisation

  Example configurations

  Substation and feed requirements

  Maintenance options

  Operational processes guidelines/standards

  Skill development

Building Considerations

- Building location considerations

  Floor and hanging loads requirements

  Fire rating for walls and glass

  Blast protection

  Bullet proofing

  Forced entry protection

Advanced Raised Floor & Suspended Ceiling

- Raised floor installation guidelines

  Techniques to install a proper and leveled raised access floor

  Common mistakes

  Choosing the right tiles and their locations

  Seismic-mitigating floor constructions

  Choosing the correct suspended ceiling

Advanced Power

- Power infrastructure layout;

  Formulas which you should know for the data centre

  Single Line Electrical diagrams; how to read to ensure key components are present for protection

  Over current protection devices (MCB/MCCB/VCB/ACB/Fuses) definitions and what to use where

  Earth Leakage devices (RCB/RCD/ELCB/GFCI/ALCI/RCBO), definitions and what to use where

  Sizing of protective components

  Lightning strikes and surge protection devices (TVSS/SPD), how they operate, where to use and how to install

  Power cabling and cable run considerations

  PDU/DB setup and minimum requirements

  Generators;

  Generator types: Standy/Prime/Continuous

  Component make up and functions

  Fuel storage and calculation

  Paralleling of gen-sets

  Generator room/area requirements

  UPS Systems;

  Required specifications for UPS systems

  How to read data sheets and select the correct UPS

  Requirements for parallel configurations and avoid pitfalls such as single point of failures

  How parallel installation should be done, classic mistakes made by installers and how to avoid these

  Harmonic Filters;

  Active/Passive filters and their application

  Battery Banks;

  Battery bank terminology

  Designing battery banks, how to calculate, and double check the battery bank to be installed

Battery charging pitfalls and ensuring the right charger is being installed and used

Using parallel battery banks; how to properly install them, limitations and risks when using batteries in parallel

How to test batteries correctly and make decisions on cell/block or string replacement

Battery casing choices; ABS, V0, V1, V2

Alternative energy storage; flywheel, re-usable cell, compressed air UPS, etc.

Advanced Electro Magnetic Fields

- Sources of EMF

  Difference between single, three phase and bus-bar EMF

  Options available to measure EMF and how to interpret the results from single-axes and composite measurements

  Guidance on safe distance for equipment and humans

  Calculation of EMF attenuation factor for shielding material permeability and saturation factors

Advanced Cooling

- Important definitions; dry-bulb, wet-bulb, dew-point, RH, sensible and latent heat

  Psychometric chart and ASHRAE recommendations

  Environmental class definitions and thermal specifications

  Temperature/humidity measurements guideline

  Heat dissipation methods

  Altitude impact on temperature intake to ICT equipment

  Floor plan setup for effective cooling

  Differences in tile surface and supporting structure and the air-flow performance impact

  Rack door construction and the flow performance impact

  Equipment Delta-T and its impact

  Optimising air flow

  Thermal units conversions

  Calculations for air volume displacement (CFM/CMH)

  Cooling capacity calculations

  Air-conditioning selection

  De- / humidifying options

  Air conditioning efficiency

  SHR impact on cost saving

  Efficiency indicator

  New cooling principle and techniques (Submerged, VSD/VRF/ECF/water- and air side economisers)

  Redundancy guidelines for air-conditioners avoiding classic misconceptions and mistakes for meeting ANSI/TIA-942 compliant designs

  Installation requirements

  Connections to fire panel and EPO

  Commissioning of air conditioners

  Set points and calibration

  CFD (Computational Fluid Dynamics)

Advanced Fire Protection

- The fire triangle and elements to stop a fire

  Detection systems in detail (VESDA, VIEW, smoke sensors)

  Considerations for installation of sensors

  Proper testing of smoke sensors

  Water based systems i.e. deluge, wet-pipe, dry-pipe, pre-action and why most of them don't work and how to detect this

  Details on Inert and Halocarbon systems and how to select the correct system for your data centre

  How to calculate the gas content ensuring the appropriate level is installed to suppress the fire including safety considerations

  Other requirements for gas systems such as release times, hold times, pipe install requirements and other important factors

  Requirements for the fire detection panel

  Installation verification, methods, what to check and how

  New advanced fire suppression technologies

Design and Install Scalable Networking Cabling System

- ANSI/TIA942 cabling structure topology

  ToR, EoR Design

  Intelligent patching systems

  Installation best practice such as routing, bending radius, separation from power, containment fill ratio, fiber link loss calculator, bonding and grounding requirement

  Standard for telecommunications labeling and administration

Environmental Specifications and Contamination Control

- Acoustic noise effects, regulations, specifications and limits

  Data centre contaminations and classifications

  Measurements, standards and limits

  Preventive measures and avoidance

Data Centre Efficiency

- Business drivers to go Green

  High-availability or Green

  Green guidelines and standards

  How to measure it and what are acceptable numbers compared to the general industry

  PUE classes defined by Green Grid and issues with PUE

  Techniques for saving energy in all parts of the data centre i.e. application/system level, cooling, power distribution

Mock ExamEXAM: Certified Data Centre Specialist

Upcoming Schedule

Available training dates for Certified Data Centre Specialist (CDCS):

Start Date	End Date	Location	Delivery	Price
09 Dec 2026	11 Dec 2026	Online	Virtual	€2,850.00

Additional Course Details

Nexus Humans Certified Data Centre Specialist (CDCS) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Certified Data Centre Specialist (CDCS) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Certified Data Centre Specialist (CDCS)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Certified Data Centre Specialist (CDCS) course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Certified Data Centre Specialist (CDCS) training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Certified Data Centre Specialist (CDCS)?

Yes, we provide corporate training, dedicated training, and closed classes for Certified Data Centre Specialist (CDCS). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for Certified Data Centre Specialist (CDCS)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Certified Data Centre Specialist (CDCS) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

Email: info@nexushuman.com

Website: www.nexushuman.com

Phone: +353 1 XXX XXXX (Ireland) | +44 20 XXXX XXXX (UK)