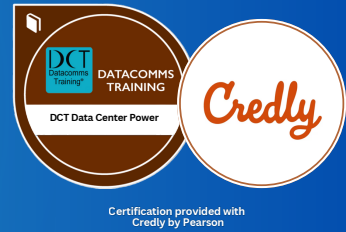


DCT DATA CENTER POWER

Reliable power is the backbone of every data centre. Our DCT Power Systems training covers UPS technologies, inverters, solar systems, generators, and ATS solutions to ensure continuous uptime and operational efficiency.



Duration: 5 Days

Course Code: DCT-DC-PWR

Overview:

The DCT Data Center Power course dives more deeply into the electrical and power systems and components that support data centers. With data centers using about 5% of the world's energy and growing, these power systems are ever-expanding and improving. The Course covers the many aspects of the most typical electrical systems and equipment for data centers, including terminology, standards, acronyms, operation, efficiency, and more.

Objectives:

- Introduction to data center electrical and power systems.
- Redundancy concepts for electrical distribution and equipment.
- Understanding of electrical equipment, systems, and controls
- How differing priorities and data center types change the electrical design

Target Audience

- Architects
- Engineering design professionals
- Facilities operations
- Contractors
- Technicians
- Electrical engineers, technicians, operators

Pre-requisite

- Basic understanding of data centers, layouts, and common terms.

Course Outline

- Introduction to Data Center
- Data center Power Requirements
- Power units - VA, W and VAR - Power Triangle
- DC and AC systems power supply systems
- Power flow in Data Center and Mission Critical Systems
- Sizing of Data Center Power & Critical Systems
- Electrical Codes and Standards for Data Centers
- Power Topologies - single phase vs three phase & AC and DC Power Supply
- Sources of Electrical Power - Gensets, Utility, Solar, Nuclear etc
- Electrical Conductors, Cables, Cable trays and conduits
- Types of Cables and Conductors
- Sizing of Data Center cables and conductors
- Cables trays and cable trunkings
- Cable conduits - PVC and Metallic
- Power Protection Devices
- Circuit breakers, Fuses, Relays, Isolators, Switches sizing
- Voltage Regulation and Stabilization devices
- Line diagrams and electrical power layout drawings
- Lightning Arrestor
- Power Distribution
- Power Distribution in data center
- Switch room Switch gear and devices
- Distribution Panels and Boards
- Critical vs Raw power distribution standards
- Floor vs Overhead Power Distribution
- Rack Power Distribution - PDUs
- EPO Guidelines and Layout
- Transformers
- ATS and MBS systems
- Power factor correction systems & Surge Suppression systems
- PUE
- Data Center energy efficiency and power efficiency
- Measuring, Monitoring & Routine Checks
- Trends in Data Center Power Systems
- Standby Power Systems
- UPS systems