

Technician



Certified Data Center  
Technician Professional

BTEC Level 4  
Professional Award



## Certified Data Center Technician Professional (CDCTP®)

### 5 DAY PROGRAM

Combined: 70% Theory 30% Practical

#### Learner Profile

This program has been specifically designed for individuals wishing to acquire skills of the highest caliber in order to carry out their technical data center duties. CDCTP® certification is beneficial to personnel who contribute to the day-to-day smooth operation of the mission critical facility.

#### Pre-requisites

Experience of working within a data center environment is essential. If you would like to discuss your experience or suitability for this program please contact us.

#### Program Requirements

Learners are required to have a webcam enabled laptop or suitable device with unrestricted wireless internet connectivity, the latest internet browser and suitable applications for reading/annotating PDFs and editing standard office documents.

#### Program Objectives

CDCTP® certified individuals possess the knowledge, expertise and skills that are considered essential in ensuring that a data center facility is operated and maintained to the highest possible standards.

#### Qualification

- ▶ Internationally and industry recognized BTEC Level 4 Professional Award Certified Data Center Technician Professional

#### Certification

- ▶ Official Certified Data Center Technician Professional (CDCTP®) certification
- ▶ Use of CDCTP post nominal title
- ▶ Use of the CDCTP® logo
- ▶ Use of the official Certified Data Center Technician Professional (CDCTP®) Digital Badge

Certifications are a commitment to life-long learning and offer the perfect portal to ensure knowledge, skills and certification remain current and up-to-date. Each certification gained requires re-certifying every three years via an online learning management system.

#### Additional Awards

- ▶ Continual Professional Development (CPDs)
- ▶ 5 IEEE Continual Education Units (CEUs)

## Certified Data Center Technician Professional (CDCTP®)

### Program Overview

Excel in a highly skilled and efficient technical team charged with optimizing the operational capability and productivity of the data center to meet the evolving demands of the business.

Ensuring zero downtime within the mission critical data center environment involves employing highly competent and confident technicians who consistently demonstrate unrivaled technical knowledge and skills. High quality technicians are increasingly seen as a vital component to the smooth running of any data center operation.

The five-day Certified Data Center Technician Professional (CDCTP®) program is for individuals working within mission critical data center facilities. It explores the wide range of subjects relevant to the data center technician including a detailed breakdown of the data center operating environments and the four key constraints to its operational effectiveness (power, cooling, IT and space), the necessary operational policies, procedures and compliance based on legislation, standards (national & international) and codes of conduct. During the program, learners will be provided a valuable opportunity to access the latest industry standards.

Certified technicians can foresee potential causes of failure honing an in-depth understanding of facility components and their operating parameters. In addition, technicians can identify, analyze, and remedy problems as they occur, quickly, decisively and accurately, avoiding potential high cost repairs and the risks associated with loss of service.

Following this program, you are encouraged to continue your professional development by advancing your knowledge and skills to gain further official certifications and qualifications by progressing through The Global Digital Infrastructure Education Framework which maps education programs to career advancement throughout the network infrastructure and data center sectors.

“ I looked forward to every day of the Certified Data Centre Technician (CDCTP) Program, the instructor was very knowledgeable and helpful ”

**DATA CENTRE SHIFT ENGINEER**

“ Amazing from beginning to end. Made me a better overall data centre technician. ”

**DATA CENTRE TECHNICIAN**

## CDCTP® Benefits for Individuals

- ▶ Understands all aspects of data center operations including technical and physical constraints. Recognizes the dependencies on other work streams, can plan work efficiently and avoid unnecessary delays
- ▶ Understands the benefits of carrying out physical inspections of data center components as a matter of routine. Adopts a proactive attitude and can identify potential equipment failures before they occur
- ▶ Understands the need to adhere to codes, legislation and standards and is focused on first-time compliance, avoiding unnecessary rework
- ▶ Recognizes the roles of others within the facility and can improve business processes through effective contribution to the right people and at the right level

## CDCTP® Benefits for Businesses

- ▶ Have a technical team equipped with a broad knowledge data center functions and operational processes enabling the business to function with optimum efficiency
- ▶ Significantly reduces the risk of failure by having knowledgeable and proactive technical staff capable of identifying signs of potential failure
- ▶ Having a technical team with a broad knowledge of codes, legislation and standards instils confidence that the data center can operate effectively whilst consistently meeting legal and contractual obligations
- ▶ Develop a technical team that is cognisant of the roles of their peers and managers ensuring efficient and timely passage of accurate information and thereby increasing productivity

## Certified Data Center Technician Professional (CDCTP®) Topics

### CDCTP®

#### Data Center Fundamentals

- ▶ What is a data center?
- ▶ Understanding the basic design requirements
- ▶ Availability and resilience measures and practices

#### Compliance

- ▶ Codes & regulations
- ▶ National and international standards
- ▶ Industry guidelines and best practices
- ▶ Certification and accreditation

#### The Physical Infrastructure

- ▶ The Four Key Environments (Power, Cooling, IT Connectivity and Space)
  - ▶ **Power**
    - ▶ Power infrastructure (data center electrical distribution)
  - ▶ **Cooling**
    - ▶ Cooling infrastructure and airflow management
    - ▶ Overview of different cooling system technologies
  - ▶ **IT Connectivity**
    - ▶ Active network
      - ▶ Equipment configuration
      - ▶ Servers, software and services
      - ▶ Storage infrastructure
      - ▶ Data center networks
      - ▶ Distribution options
    - ▶ Physical Network
      - ▶ IT cabinets and frames
      - ▶ Cable containment
      - ▶ Data center topologies
      - ▶ structured wiring
      - ▶ Fiberoptical cabling
  - ▶ **Space**
    - ▶ Relationship between white and grey space environments
    - ▶ Physical security and access control

#### Working in the Data Center

- ▶ Safety Consideration
  - ▶ Risk assessment and method statements
  - ▶ Environmental health and safety
  - ▶ Personal protective equipment
  - ▶ Life safety systems (fire detection and suppression)
- ▶ Task Preparation
  - ▶ Understanding the operation structure
  - ▶ Operational processes and procedures
  - ▶ Move, Adds and Changes (MACs)
  - ▶ Decommissioning
  - ▶ Operational measuring and monitoring
- ▶ Asset Management
  - ▶ Management tools, administration
  - ▶ Change management

#### Data Center Maintenance

- ▶ The need for maintenance
- ▶ Maintenance strategies
  - ▶ Preventative maintenance
  - ▶ Predictive maintenance
  - ▶ Reliability centered maintenance
  - ▶ Condition-based maintenance
- ▶ Power maintenance
- ▶ Cooling maintenance
- ▶ IT connectivity maintenance

#### Advanced Power

- ▶ Electrical safety
- ▶ Power infrastructure systems (distribution path and components)
- ▶ Back-up power infrastructures
- ▶ Earthing and bonding
- ▶ Measuring, monitoring and routine checks
- ▶ Benchmarking and data center metrics

#### Advanced Cooling

- ▶ Understanding the need for cooling
- ▶ Data center cooling architectures and systems
- ▶ Air cooling
- ▶ Economizer modes
- ▶ Liquid cooling
- ▶ Chilled water plant
- ▶ Cooling towers
- ▶ Measuring, monitoring and routine checks
- ▶ HVAC efficiency and Power Usage Effectiveness (PUE) relationship

There are a number of group and individual case studies throughout this program