

DESIGN



Certified Network Infrastructure Design Professional

Pearson BTEC Level 5 Professional Award

5 Day Program

CNet Training

An Uptime Education Company

The Global Leader in Technical Education for the Digital Infrastructure Industry

Learner Profile

This program is designed for telecommunications and data communications engineers within the network cabling design and installation environment, and those wishing to extend their skills, knowledge, qualifications and certifications in relation to the planning and design of cable systems within different environments. Learners will have sound knowledge of copper and fiber optic cabling infrastructure and awareness of networks, inside plant and outside plant. They will also have an understanding of how relevant standards are applied to design.

Pre-requisites

A minimum of five years experience of working in the network infrastructure sector is required with at least two years project delivery experience, preferably in an installation management or infrastructure design role. In addition, knowledge of applicable industry standards would be advantageous. If you would like to discuss your experience or suitability for this program please contact us.

Program Requirements

Learners are required to undertake pre-class study, which is fully supported by an experienced and dedicated online support team.

Learners are required to have:

- ▶ A webcam and microphone enabled laptop with unrestricted wireless internet connectivity and a pre-installed web browser
- ▶ A suitable application for reading/annotating PDFs and a suitable application for editing standard office documents such as Microsoft Word, PowerPoint, and Excel

Qualification

- ▶ Internationally and industry recognized Pearson BTEC Level 5 Professional Award Certified Network Infrastructure Design Professional

Certification

- ▶ Official Certified Network Infrastructure Design Professional (CNIDP®) certification
- ▶ Use of the CNIDP post nominal title
- ▶ Use of the official CNIDP® digital badge
- ▶ Use of the CNIDP® logo

Certifications are a commitment to lifelong 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

- ▶ Eligibility for an ECS (Electrotechnical Certification Scheme) Network Infrastructure Designer card (only available in the UK)
- ▶ Continual Professional Development (CPDs)
- ▶ 8 IEEE Continual Education Units (CEUs)

Certified Network Infrastructure Design Professional (CNIDP®)

Learn how to complete a detailed campus network design project and deliver this to the market via an effective tender response.

Program Overview

The five-day Certified Network Infrastructure Design Professional (CNIDP®) is a full and comprehensive program that equips network infrastructure professionals with the knowledge, skills and confidence to deliver complex infrastructure design projects from inception through to customer handover.

The importance of collaborative working with key stakeholders is also emphasized to ensure that the optimal internal and external network infrastructure solutions are delivered, offering flexibility and resilience across a wide range of services, ensuring that network performance is maximized to meet the customer's specified Key Performance Indicators (KPIs).

The program explores the complex issues involved when designing whilst planning for both Inside Plant (ISP) and Outside Plant (OSP) network infrastructures, examining the role of the designer and the multitude of disciplines required to deliver a multifaceted design to meet the customer requirements. Learners will benefit from understanding the design lifecycle (from concept to design completion), including the analysis of the customer needs, the site survey process and detailed structure of a final design document.

It also significantly elevates the knowledge and skills of the learner within the project delivery lifecycle. The program explores the complex issues involved in completing a response to a Request for Quotation (RFQ) or Invitation to Tender (ITT).

Learners will benefit from gaining an understanding of all aspects of the tendering process from RFQ/ITT through to tender award, and will understand the importance of the bid evaluation process and

appreciate the need for thorough, detailed and accurate submittals to the client's project team.

Elements such as calculating accurate project delivery costs, and creating a comprehensive implementation plan and handover criteria, will be examined in detail and provide a thorough overview of all elements involved in producing a successful tender response document.

A certified CNIDP® also considers the requirements for compliance, having a full understanding of national and international regulations, codes and standards. During the program learners will be provided a valuable opportunity to access the latest industry standards.

The CNIDP® program is led by one of CNet's expert Instructors and is available via remote attendance or classroom-based.

Program Duration

5 days.

Program Format

40% Theory, 60% Practical.

Program Objectives

Successful learners will gain in-depth knowledge and supporting skills to confidently deliver detailed design documentation and the process of evolving a customer Statement of Requirement (SOR) into an accurate and successful tender response document. Learners gain an understanding of the importance of national and international standards and can confidently apply them to design projects. Learners will also know how the tender document is processed and the assessment criteria involved.

“I’m very impressed with the CNIDP® program. Since attending, I have won two tender bids where I have used the methodology I was taught.”

CNIDP® Learner Comment

Certified Network Infrastructure Design Professional (CNIDP®) Topics

Design Principles

- ▶ Assess requirements
- ▶ Information gathering
- ▶ CDMQ
- ▶ Constraints
- ▶ Capacity planning

Standards

- ▶ Standards organizations
- ▶ Cabling standards
- ▶ Installation standards
- ▶ Electrical standards
- ▶ Network and application standards
- ▶ Building Information Modeling (BIM)

Spaces and Working Areas

- ▶ Building Entrance Facility (BEF)
- ▶ Main Equipment Room (MER)
- ▶ Building Distributor (BD)
- ▶ Floor Distributor (FD)
- ▶ Horizontal/work area distribution

Site Survey

- ▶ Site survey process
- ▶ Greenfield and brownfield impacts
- ▶ Formulation of site survey report

Cabling Sub-systems (ISP & OSP)

- ▶ OSP cabling
- ▶ Backbone cabling
- ▶ Horizontal cabling
- ▶ Network cabling

Network Architecture

- ▶ Ethernet
- ▶ VoIP
- ▶ CCTV
- ▶ Wireless
- ▶ Access control
- ▶ Environmental management
- ▶ Fire alarms

Pathways and Containment

- ▶ Cable distribution systems
- ▶ Raised access floor
- ▶ Confined spaces
- ▶ OSP cable duct systems

Fire Stopping

- ▶ Types and specifications
- ▶ Mechanical and non-mechanical
- ▶ Regulations and testing

Bonding and Earthing

- ▶ Regulations
- ▶ Protective Earth (PE)
- ▶ Equipotential bonding
- ▶ Electrical and UPS

Test and Commission Specification

- ▶ Commissioning process
- ▶ Certification test methods
- ▶ Testing standards

Understand the Design Process

- ▶ Roles of the design team
- ▶ Design stages
- ▶ Contracts
- ▶ Tools and traits for success

Customer Requirements Assessment

- ▶ Conducting customer interviews
- ▶ Identifying key stakeholders
- ▶ Needs analysis
- ▶ Scope, plan and schedule

ITT/RFQ Development

- ▶ RFP/RFQ objectives and structure
- ▶ Formulation of RFP/RFQ
- ▶ Scope review
- ▶ Bid submission
- ▶ Change management

Bid Evaluations and Contract Negotiations

- ▶ Bid evaluation techniques
- ▶ Shortlist interviews
- ▶ Contract negotiations
- ▶ Contract award

Project Execution

- ▶ Project delivery cycle
- ▶ Contractual and professional obligations
- ▶ Project scope and schedule
- ▶ Quality assurance/change management
- ▶ Installation and test sequences
- ▶ Communication plan
- ▶ Manage stakeholder expectations

Administration, Documentation and Plans

- ▶ Identification systems
- ▶ Test results and reports
- ▶ As-built documentation
- ▶ Handover process
- ▶ Warranty compliance

Commissioning and Closure

- ▶ Commission and test sequence
- ▶ Test results and documentation
- ▶ Snag/punch list process
- ▶ Customer handover
- ▶ Customer training
- ▶ Project closure process

CNIDP® Benefits for Individuals

- ▶ Make effective design decisions based on detailed client requirements that demonstrates compliance with national and international standards
- ▶ Deliver detailed drawings that accurately depict network infrastructure components
- ▶ Generate a precise bill of materials detailing all infrastructure material requirements by type and quantity, including complex cost calculations
- ▶ Specify the requirements for project documentation in support of progression and closure
- ▶ A right-first-time approach that is technically accurate in all aspects

CNIDP® Benefits for Businesses

- ▶ Confidence that design decisions are clearly represented enabling the prospective client to assess technical compliance with the statement of requirements
- ▶ Costs are clearly and accurately communicated to the prospective client mitigating the risk of variations and change requests during implementation
- ▶ Reassurance that project design documents clearly outline the implementation and closure processes, ensuring a smooth transition from installation to operations, and enabling timely completion and handover to the customer