CNet Training
An Uptime Education Company

Global Leading Technical Education for the Digital Infrastructure Industry

Certified Network Cable Installer (CNCI®)

Demonstrate the highest levels of knowledge, skills and competency in network cable infrastructure.

Program Overview

Undertake copper and fiber cabling installation, termination and testing to the highest quality whilst complying to industry best practice and standards to ensure a right first-time approach.

The Certified Network Cable Installer (CNCI®) has become the industry preferred certification for network cable installation and is specified as a requirement on many job profiles and installation project contracts. In addition, manufacturers, major installation companies, associations and consultants endorse the certification knowing that it provides the right level of technical knowledge, competence and confidence to the industry. In recognition of the CNCI® certification, many manufacturers also award accreditations towards their product warranties.

This comprehensive ten-day program offers the perfect mix of technical knowledge and practical activities for both copper and fiber component installation. Official CNCI® certification proves that an individual is certified to undertake network cable infrastructure projects to the highest caliber whilst working to the current national and international industry standards and industry best practice. During the program learners will be provided a valuable opportunity to access the latest industry standards.

Having successfully completed this program, and with the appropriate level of experience, it is highly recommended that you 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.

The CNCI® program is classroom-based and led by one of CNet's expert Instructors.

Program Duration

- 5 Day CNCI® Copper Cabling
- 5 Day CNCI® Fiber Optic Cabling

Program Format

50% Theory, 50% Practical.

Program Objectives

Learners will gain the knowledge and skills to confidently install, test and certify a complete copper and fiber cable installation.

Learner Profile

The CNCI® program is perfect for individuals wishing to acquire the very latest skills and knowledge to enable them to complete both copper and fiber cable installation projects to the highest standards. It is relevant to new entrants to the network cable infrastructure sector in addition to those already working within the cable installation environment wishing to formalize their knowledge and skills.

Pre-requisites

No previous experience is required to attend this program.

Program Requirements

Learners are required to have:

- A laptop or suitable device with unrestricted wireless internet connectivity and a pre-installed web browser
- A suitable application for opening and reading PDFs. Typically, your device's in-built PDF reader is sufficient

Qualification

- Pearson BTEC Level 3 Award in Certified Network Cable Installer (Copper)
- Pearson BTEC Level 3 Award in Certified Network Cable Installer (Optical Fiber)

Certification

- Official Certified Network Cable Installer (CNCI®) certification
- Use of the CNCI post nominal title
- Use of the CNCI® logo
- Use of the official CNCI® digital badge
- Fluke CCTT® certification

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 Installer (Level 3) card (only available in the UK)
- Continuing Professional Development (CPDs)
- 10 IEEE Continued Education Units (CEUs)

"The CNCI is a must have program for installers. It gives in-depth details on cable installation, proper handling and testing."

CNCI® Learner Comment

Certified Network Cable Installer (CNCI®) Topics

CNCI® Copper Cabling

Introduction to Structured Cabling
- Cable media types
- Network topologies
- Categories

LAN Hardware
- PCs, switches, routers

Installing Structured Cabling
- National and international standards
- Interpreting drawings
- Risk evaluation
- Working in containment routes
- Cable installation, cable termination
- Tool and equipment selection

Network Overview
- What is a network?
- Characteristics of a network
- Resource sharing

Signal Theory
- Electrical principals
- DC current principals
- Analogue versus digital

Health & Safety
- Legislation
- Workplace risk
- Electrical safety
- Working at heights
- Working in confined spaces

Standards
- Why standards?
- Standard bodies, BSI, ISO, CENELEC, TIA/EIA
- Relationships between standards
- Categories and classes

Fire Safety
- Why fire stop?
- Types of fire stopping
- Three pillars of fire stopping
- Construction Product Regulation (CPR)

Documentation & Labeling
- Floor plans
- Naming conventions
- Symbols
- Records

Testing & Commissioning
- Continuity testing
- Certification/ acceptance testing
- Level IV testing
- Saving of results to database
- O & M manuals

Practical
- Patch cord manufacture
- Cable installation
- Termination techniques UTP/STP
- Patch panel/outlet termination, Cat 5e/ Cat6

Fluke CCTT (Copper)
- Copper certification (DSX)
- Set up DSX
- Test using DSX
- Troubleshoot
- Test standards/limits
- DSX diagnostics
- HDTDX and HDTDR

CNCI® Optical Fiber Cabling

Safely Working with Fiber/General Safety
- LED, VCSEL, laser safety
- Fiber preparation hazards, disposal of sharps
- Hazardous substances
- OSP safety, pits, gas detection
- General safety

Network Overview
- History of fiber
- Advantages
- What is a network?
- Benefits of a network
- Topologies
- Why a network?

Hardware
- Cable construction
- LED, VCSEL, laser sources
- Switches, routers, media converters

Theory of Light Transmission
- Optical windows
- Electromagnetic spectrum
- Transmission
- Media choice

Cable
- Construction
- Choice of cable
- Installation practices
- Patch cords

Enclosures
- ODF
- 19" splice tray
- Slack fiber management, protection, patch field

Standards
- Standards bodies BSI, ISO, CENELEC, TIA/EIA
- Classifications
- Application distances

Connectors
- Connector types
- Functionality
- Density (SFF)

Outside Plant (OSP)
- Fiber backbone to the LAN
- Hardware
- Media choice

Fiber Splicing
- Safety
- Fusion splicer set up and operation
- Singlemode programs
- Multimode programs
- Splicing in patch panels

Fiber Termination
- Safety
- Pigtail manufacture
- Techniques, cold cure, mechanical splice, fusion splice
- End-face inspection techniques

Fluke CCTT (Fiber)
- Tier 1 fiber certification (CertiFibre® Pro)
- Tier 2 fiber certification (OptiFibre® Pro)
- Encircled Flux (EF)
- End-face inspection
- Set a reference
- OTDR event types
- OptiFibre® Pro link testing

There are a number of individual practical activities and assignments leading to a group installation project.

CNCI® Benefits for Individuals

- Become one of the elite certified network cable installers in the country
- Demonstrate the highest levels of knowledge, skills and expertise in network infrastructure installation
- Confidently install copper and fibre cable correctly in accordance with industry best practice and in compliance with national and international standards
- Plan individual tasks, and the materials required, accurately and with confidence
- Demonstrate a sound knowledge of personal health and safety risks and take practical steps to mitigate them
- Become proficient at selecting the correct products to effectively construct pathways and containment systems to support cable infrastructure
- Install copper and fiber network cable infrastructure projects on time and within budget, maximizing profit potential
- Possess the skills and aptitude to test and certify installed copper and fiber cable infrastructure in accordance with the correct test criteria

CNCI® Benefits for Businesses

- Competitive edge, certified, qualified and add value to tender responses
- Knowledge that employees have a full and rounded knowledge in network infrastructure installation, improving competency and productivity
- Reduced time and material wastage as employees are equipped to carry out tasks in an accurate and timely manner
- Deliver infrastructure installation projects to the highest quality standards resulting in increased client satisfaction and potential repeat business
- Confidence that health and safety best practice is being employed, mitigating the risk of potential red card action or loss of time due to injuries
- Reassurance that capacity limits are not exceeded, therefore ensuring value for money and conformance to client requirements
- Meet contractual requirements reducing sign off and project hand over times
- Ensures that network infrastructure is fully serviceable and meets the transmission requirements of the network