Installation

CNCI®

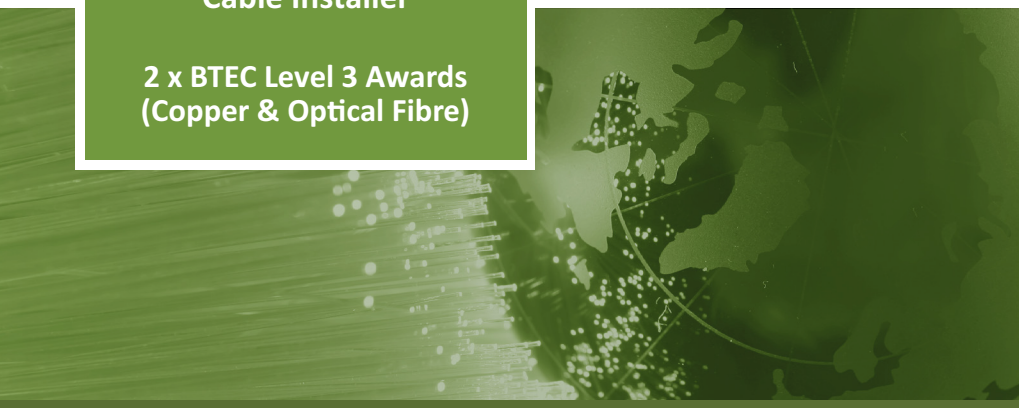
Certified Network Cable Installer

2 x BTEC Level 3 Awards (Copper & Optical Fibre)

Customer Focused ▶▶
Quality Driven ▶▶▶▶

CNet Training

The **Global Leader** in **Technical Education** for the **Digital Infrastructure Industry**



Shaping the future of the Network Infrastructure Sector

Certified Network Cable Installer (CNCI®)

Program Overview

The Certified Network Cable Installer (CNCI®) program and certification is shaping the future of the network cabling infrastructure industry by introducing professional and industry recognised certification to cable installers.

The CNCI® is designed for those wishing to demonstrate the highest levels of knowledge, skills and expertise in network cabling infrastructures. With a team of professionally trained and CNCI® certified individuals the risks are significantly reduced and organisations can feel confident that their staff are competent to meet today's industry demands. Employing un-trained staff to work on critical projects poses a significant risk to your business. Employing professionally certified and qualified staff who you can rely on to deliver consistent results, significantly reduces that risk and offers an impressive Return On Investment (ROI) against the cost of the technical training.

CNCI® offers the perfect solution for network cabling organisations to help ensure they continue to deliver quality of service and confidence to the market place, in addition to helping secure an organisation's professional reputation.

The program is comprehensive and blends a perfect mix of theoretical study and practical installation, testing and survey exercises providing the right level of knowledge and skills for both copper and fibre cable installation practices. Official CNCI® certification proves that an individual is qualified to undertake cable installation projects to the highest possible calibre whilst working to the current industry standards including BS EN, TIA and ISO, whilst following the latest codes of best practice. During the program learners will also have access to current standards for reference purposes.

In addition, major manufacturers endorse the certification knowing that it provides the right level of technical knowledge, competence and confidence to the industry whilst demonstrating capability and credibility. Many also recognise it towards their own product training.

This program is a must for individuals currently working within, or wishing to enter, the cable installation and infrastructure environments. Project managers, IT personnel, Installation Technicians, Network Engineers, Data Centre Technicians and electrical engineers would all benefit from attending the CNCI® program.

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

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
- Plan individual tasks and materials required accurately and with confidence
- Install copper and fibre network cable infrastructure projects on time and within budget, maximising profit potential.

CNCI® Benefits for Business

- Confidence that employees have a full and rounded knowledge in network infrastructure installation, improving competency and productivity
- Reduced time and material wastage - employees can carry out tasks in an accurate and timely manner
- Delivering infrastructure installation projects to the highest quality standards resulting in increased client satisfaction and potential repeat business
- Meet contractual requirements reducing sign off and project hand over times

Certified Network Cable Installer (CNCI®)

10 DAY PROGRAM

Split into:

- **5 Days Copper Cabling**
- **5 Days Optical Fibre Cabling**

Combined: 50% Theory 50% Practical

The CNCI® Program consists of 408 pages of rich technical content.

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 fibre cable installation projects to the highest standards. It is relevant to new entrants to the cabling industry in addition to those already working within the cable installation environment wishing to formalise their skills. Project managers, IT personnel, installation technicians, network engineers and electricians would all benefit from attending this program.

Pre-Requisites

No previous experience is required to attend this program. However, if you are working in the network infrastructure industry, it will prove advantageous.

Program Objectives

Successful learners will have the knowledge and skills to confidently install, test and certify a complete copper and fibre cable installation. This forms part of the entry level requirement into the Global Digital Infrastructure Education Framework which allows learners to progress their knowledge, education and skills in line with their career within these fast moving industries. See www.cnet-training.com to view the Global Digital Infrastructure Education Framework.

Qualification

- Internationally and industry recognised BTEC Level 3 Award Certified Network Cable Installer (Copper)
- Internationally and industry recognised BTEC Level 3 Award Certified Network Cable Installer (Optical Fibre)

Certification

- Official Certified Network Cable Installer (CNCI®) certification
- Use of CNCI post nominal title
- Use of the CNCI® logo

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

- Eligibility for an ECS (Electrotechnical Certification Scheme) Datacomms Specialist card
- Continual Professional Development (CPDs)
- 10 IEEE Continual Education Units (CEUs)

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Certified Network Cable Installer (CNCI®) Topics

CNCI® Copper Cabling

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

LAN Hardware
- PC's, 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 v. digital

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

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

Fire Stopping
- Why fire stop?
- Types of fire stopping
- Three pillars of fire stopping

Documentation & Labelling
- 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

CNCI® Optical Fibre Cabling

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

Network Overview
- History of fibre
- 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
- Patchcords

Enclosures
- ODF
- 19" Splice tray
- Slack fibre management, protection, patch field

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

Connectors
- Connector types
- Functionality
- Density (SFF)

Outside Plant (OSP)
- Fibre backbone in the LAN
- Hardware
- Media choice

Fibre Splicing
- Safety
- Fusion slicer set up and operation
- Singlemode programs
- Multimode programs
- Slicing in patch panels

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

Fluke CCTT (Fibre)
- Tier 1 fibre certification (CertiFibre® Pro)
- Tier 2 fibre 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.

> "The CNCI® program provides the perfect opportunity for us to get behind a recognised certification that provides the right level of technical knowledge and gives reassurance to customers. The feedback we have had from our staff that have attended the program has been excellent, even those with lots of experience have found the program challenging and rewarding."
>
> **OPERATIONS DIRECTOR**

> "This is a really good program. The content is comprehensive and relevant. The tutor is capable and knowledgeable with ample onsite experience to offer useful analogies and understands the issues faced by installers in the field."
>
> **PROJECT MANAGER**

> "The CNCI® program is comprehensive and at the depth that we were looking for, it also provides official certification and two level 3 qualifications as evidence of learning."
>
> **COURSE CO-ORDINATOR**
> **THE ROYAL CORPS OF SIGNALS**

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