

## Installation



**Certified Network  
Cable Installer**

**BTEC Level 3 Award  
(Optical Fiber)**



Shaping the future of the Network Infrastructure Sector

## CNCI® Fiber Optic Cabling

### Program Overview

**Demonstrate the highest levels of knowledge, skills and competency in fiber optic cable installation, termination and testing to the highest quality whilst complying to industry best practice and standards to ensure a right first-time approach.**

It's a comprehensive five-day program that blends a perfect mix of technical knowledge and practical activities for fiber optic component installation, termination and testing. It proves that an individual is qualified to undertake fiber optic cable installation 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.

The CNCI® certification is awarded on successful completion of both the CNCI® Optical Fiber and the CNCI® Copper Cabling programs.

On successful completion of the CNCI® Optical Fiber Cabling program it is recommended that you attend the CNCI® Copper Cabling program to secure the official CNCI® certification. Following this, 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.

The CNCI® program is led by one of CNet's expert Instructors.

### CNCI® Fiber Cabling Topics

#### 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
- ▶ Patchcords

#### 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 in the LAN
- ▶ Hardware
- ▶ Media choice

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

## CNCI® Fiber Optic Cabling

### 5 DAY PROGRAM

#### Learner Profile

The CNCI® Optical Fiber Cabling program is perfect for individuals wishing to acquire the very latest skills and knowledge to enable them to complete fiber optic 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 bring a laptop or suitable device with unrestricted internet connectivity, with a suitable application for opening and reading PDFs. Typically, your device's in-built PDF reader is sufficient. If preferred a smartphone can be used, however a smaller screen may not give the best learning experience.

#### Program Objectives

Successful learners will have the knowledge and skills to confidently install, test and certify a complete fiber optic 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.

If you are entering the industry or looking to formalize your skills with an industry recognized qualification and gain units towards the official CNCI® certification, this program, combined with the CNCI® Copper Cabling program is perfect for you.

#### Qualification

- ▶ Level 3 BTEC Award Certified Network Cable Installer (Optical Fiber)

#### 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

#### Fiber Testing

- ▶ Tier 1 fiber certification
- ▶ Tier 2 fiber certification
- ▶ Encircled Flux (EF)
- ▶ End face inspection
- ▶ Set a reference
- ▶ OTDR event types