# Certified Integrated Infrastructure Technician (CIIT®) Training

Duration: **5 Day**

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## Overview

Develop a practical “smart hands” approach to infrastructure deployment while building comprehensive knowledge of the intelligent devices that form part of modern smart building technical architecture.

The Certified Integrated Infrastructure Technician (CIIT®) program develops the technical knowledge and hands-on skills required to deliver network infrastructure projects involving the installation and commissioning of intelligent network devices. This comprehensive five-day program is designed for professionals with at least two years of verifiable experience in the network infrastructure sector, as well as those holding relevant qualifications or certifications gained within a wider project environment.

Alongside technical implementation, the CIIT® program addresses essential compliance requirements. Learners develop an understanding of relevant national and international regulations, codes and standards, with opportunities during the program to access and review current industry standards.

The program explores how the operating characteristics of different intelligent devices affect bandwidth demand across the network. It also considers the impact that the power requirements of Power over Ethernet (PoE) devices can have on the supporting cabling infrastructure.

Hands-on practical sessions form an important part of the program, with particular attention given to PoE network equipment architecture. Learners install smart devices including wireless access points, AV systems, CCTV cameras and access control systems. They interpret manufacturer instructions to ensure equipment is mounted correctly and positioned to support optimum device operation.

Each device is connected to the structured cabling network and connectivity is verified. As the infrastructure is expanded, learners also maintain accurate as-fitted documentation reflecting the completed installation.

Learners configure smart devices through the relevant system graphical user interfaces and complete tasks based on technical requirements documentation. Activities include activating switch ports for PoE and LAN connectivity, adopting devices into service, creating device identities and assigning IP addresses. Common device functions, features and configuration settings are also explored.

Following the program, learners are encouraged to continue their professional development. Progression through The Global Digital Infrastructure Education Framework provides opportunities to develop further knowledge and skills and work towards additional recognised certifications and qualifications supporting career advancement throughout the network infrastructure and data centre sectors.

The CIIT® program is delivered in a classroom environment and led by an expert instructor.

## Prerequisites

A minimum of two years of installation experience within the network infrastructure sector is

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required.

Successful completion of the Certified Network Cable Installer (CNCI®) program would be advantageous. If you would like to discuss whether your existing experience is suitable for the program, please contact us.

## What You Will Learn

Successful learners will develop the knowledge, competency and confidence required to install and commission Smart Building technology devices.

Upon completion, learners will be able to demonstrate advanced technical skills and practical capability when installing systems including:

- Wireless access devices
- VoIP telephony
- CCTV cameras
- Door access control systems
- Biometric security systems

## Outline

### The Role of the CIIT®

- Understanding intelligent buildings and associated technologies
- Selecting and preparing equipment for installation
- Installing terminal equipment
- Commissioning terminal equipment
- Troubleshooting installation issues

### The Internet of Things (IoT)

- Key acronyms and definitions
- Building management systems
- Smart buildings, smart cities and smart homes
- Network convergence

### Compliance

- Codes and regulations
- National and international standards
- Industry best practices
- Service warranties

### Power over Ethernet (PoE)

- Understanding the PoE concept

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- PoE standards and power ratings
- Power considerations and media selection
- PoE injection devices

### Virtual Local Area Networks (VLANs)

- VLAN structure
- VLAN planning
- Switch configuration

### Health and Safety

- Applicable legislation
- Risks associated with AV equipment installation
- Safe working practices
- Risk assessments

### IT Networks

- Network characteristics
- Ethernet
- Network structure
- LAN architecture
- Bandwidth

### Fixing and Fastening IT Network Equipment

- Pre-installation considerations
- Video walls
- Wall-mount brackets
- Ceiling-mounted equipment

### Understanding Intelligent Architecture

- Access control
- CCTV infrastructure
- Wireless access networks
- Audio visual networks
- Power and bandwidth considerations for PoE networks

### Practical Installation Tasks

- Installing access control devices
- Installing CCTV camera systems
- Installing wireless access points
- Installing audio visual systems
- Installing PoE network switches
- Configuring devices
- Troubleshooting network failures

### Final Case Study

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The program concludes with a final case study designed to challenge learners to plan and prepare their practical installation activities before carrying out the required installation tasks.