BICSI Cabling Installation Program





### Hello and Welcome to the Networks Centre Training Academy.

Getting a good start in your chosen career path is essential in any profession. A solid training programme with clear goals is key in making this happen.

BICSI installer courses, updated in 2017, have been developed to provide a comprehensive introduction to network cabling, leading to options of

becoming a specialist in copper or fibre installations and finally the technician course for those looking to become team leaders.

Coupled with the design credentials, you can rely on BICSI to provide qualified, informed industry professionals.

Keith Sawyer Technical Services Director







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### **BICSI** Cabling Installation Program Overview

The goal of BICSI's Cabling Installation Program is to produce highly competent cabling installers. Revised and updated in 2017, this programme provides a career path consisting of four progressive courses and credentialing exams, allowing students to begin with basic fundamentals and build upon that knowledge. Upon completion of training, programme participants should be able to conduct site surveys and install, terminate, and test copper and optical fibre cable to the highest level of specification.

#### IN101: BICSI Installer 1 Training

The Installer 1 Training provides the fundamentals of cabling installation, including introductory knowledge and basic skills.

#### Individuals who most commonly take part in the Installer 1 Training include:

- Those looking for a career in cabling installation
- Individuals with little or no cabling experience who want to know more about cabling installation
- Candidates preparing for the Installer 1 exam

#### Suggested Training & Study Materials:

- IN101: Installer 1 Training
- Information Technology Systems Installation Methods Manual (ITSIMM)

#### IN225: BICSI Installer 2, Copper Training

The Installer 2 Copper Training provides an overview of transmission principles related to copper, professionalism, safety and industry best practices. Those who hold this credential have shown that they can effectively perform all installation tasks, specific to copper.

### Individuals who most commonly take part in the Installer 2, Copper Training include:

- Installers seeking to expand their knowledge and learn new copper installation skills
- · Level 1 Installers seeking the Installer 2, Copper Training credential
- Candidates preparing for the Installer 2, Copper Training exam

#### Suggested Training & Study Materials:

- IN101: Installer 1 Training
- IN225: Installer 2, Copper Training
- Information Technology Systems Installation Methods Manual (ITSIMM)

#### IN250: BICSI Installer 2, Optical Fiber Training

The Installer 2 Optical Fiber Training provides an overview of transmission principles related to optical fibre, professionalism, safety and industry best practices. Those who hold this credential have shown that they can effectively perform all installation tasks, specific to fibre.

### Individuals who most commonly take part in the Installer 2, Optical Fiber Training include:

- Installers seeking to expand their knowledge and learn new optical fibre installation skills
- Level 1 Installers or Level 2, Copper Installers seeking the Installer 2, Optical Fibre Training credential
- Candidates preparing for the Installer 2, Optical Fiber Training exam

#### Suggested Training & Study Materials:

- IN101: Installer 1 Training
- IN225: Installer 2, Optical Fiber Training
- Information Technology Systems Installation Methods Manual (ITSIMM)

#### TE350: Technician Training

The Technician Training prepares individuals to become team leaders in the field. Technicians demonstrate effective project management skills, which include adapting and adjusting to overcome issues which arise during installation. BICSI Technicians are well prepared to move into design or continue to advance in ICT project management.

### Individuals who most commonly take part in the Technician Training include:

- Highly experienced cabling installers who oversee the planning and management of installation projects
- Installers seeking to expand their knowledge and learn advanced copper and optical fibre installation skills
- Candidates preparing for the Technician exam

#### Suggested Training & Study Materials:

- IN101: Installer 1 Training
- IN225: Installer 2, Copper Training
- IN225: Installer 2, Optical Fiber Training
- TE350: Technician Training
- Information Technology Systems Installation Methods Manual (ITSIMM)

### IN101: BICSI Installer 1 Training

BICSI Installer 1, Training candidates are tested on their ability to understand and apply a comprehensive collection of installation-specific information. After achieving your BICSI Installer 1 Training designation, you will demonstrate your ability to:

- · Successfully terminate various types of copper connectors.
- Properly explain the importance of safety and professionalism toward optimal job performance.
- Discuss pathways, spaces, bonding and grounding and fire-stopping.
- Make decisions based on applicable codes, standards and best practices.
- Choose the correct tool or methodology for specific tasks.

This course is designed to provide entry-level installers with the background, knowledge and basic skills needed to function safely and effectively as part of a cabling installation team. The BICSI Installer 1 Training course is the introductory course of the BICSI Cabling Installation Program series.

#### Course Highlights:

This course provides foundational knowledge for entry-level installers including:

- · Professionalism at the work site
- Transmission fundamentals
- Safety practices and procedures
- Learn to pull cable, perform multiple IDC terminations (66, 110, LSA and BIX), terminate coaxial cable and perform basic testing of copper cabling installations

#### Knowledge & Skill Requirements:

Participants must be able to:

- Distinguish between different colours
- · Possess manual dexterity to complete fine motor tasks
- Stand for extended periods of time (e.g. 30 minutes)
- Climb ladders & lift and carry items weighing upwards of 22.7kg (50lb)

# WHAT'S GREAT ABOUT THIS COURSE?

IN101 provides an active learning experience with multiple hands-on activities, providing learners with marketable, real-world skills.

### About This Course:

- 5 1/2 day course
- 35 CECs

### Who Should Attend:

- · Individuals with little or no cabling experience
- Anyone wishing to pursue a career in ICT cabling distribution
- · Individuals needing basic knowledge of and skills in cabling installation
- Anyone planning to take the BICSI Installer 1 Training exam

### **PREREQUISITES & PREPARATION**

Little or no experience is needed to sit for this class, however, BICSI strongly recommends reading the ITSIMM before coming to class and/or taking the exam. In addition, some students may benefit from completing the online ICT Fundamentals series through BICSI CONNECT prior to attending. For students who plan to take the exam, BICSI recommends that examinees spend at least 50 hours studying the ITSIMM.

### CEC INFORMATION 35 BICSI CECS

### IN225: BICSI Installer 2, Copper Training

BICSI Installer 2, Copper Training candidates are tested on their ability to understand and apply a comprehensive collection of installation-specific information. Achieving your BICSI Installer 2, Copper Training designation will demonstrate your ability to:

- · Successfully interpret drawings, plans, and specifications.
- · Properly test and troubleshoot copper installations.
- Discuss media selection and implications for implementation on the network.
- · Make recommendations based on applicable codes, standards and best practices.
- Interpret the job plan and scope of work, as well as perform retrofits and upgrades for existing infrastructure.

This course sets the foundation of a copper-based structured cabling system installation. The course begins with an overview of professionalism, copper transmission principles and general safety practices associated with working with copper cabling. A significant amount of course time will be spent on BICSI best practices for the installation, termination and testing of copper cable.

#### Course Highlights:

This course offers multiple opportunities for hands-on practice.

- Perform advanced IDC terminations (110 and GigaBIX)
- Terminate STP cable to patch panels and wall outlets
- Terminate coaxial cable using a BNC connector
- Test copper cabling installations

#### Knowledge & Skill Requirements:

Participants must be able to:

- Distinguish between different colours
- · Possess manual dexterity to complete fine motor tasks
- Stand for extended periods of time (e.g. 30 minutes)
- Climb ladders & lift and carry items weighing upwards of 22.7kg (50lb)

# WHAT'S GREAT ABOUT THIS COURSE?

IN225 prepares the learner to be an expert in structured copper cabling systems by building knowledge and skills that align to industry codes and standards through practical application.

### About This Course:

- 5 1/2 day course
- 35 CECs

#### Who Should Attend:

- ICT installers with at least one year of verifiable cabling experience
- Anyone who wishes to expand their knowledge of the industry, learn new copper installation skills
  and continue to advance professionally
- · Level 1 installers seeking the BICSI Installer 2, Copper Training credential
- Individuals planning to sit the BICSI Installer 2, Copper Training exam

### **PREREQUISITES & PREPARATION**

Students of this class may wish to first attend IN101 or gain equivalent experience and knowledge through on-the-job-training. BICSI recommends that all students who take this class have at least 1 year of verifiable ICT industry installation experience within the last 5 years.

The skills in this course build on the basic skills and knowledge that an installer is likely to acquire during the first year on the job. For this reason, students will be expected to have basic knowledge of copper cabling media and know how to perform the following skills prior to attending class:

- Install a pull string
- Pull horizontal cable through a continuous conduit run
- Perform IDC terminations on a 66 block, 110 block, LSA block and a BIX block
- Terminate coaxial cable using an F connector
- Test 4-pair cable with a pair scanner

### IN250: BICSI Installer 2, Optical Fiber Training

BICSI Installer 2, Optical Fiber Training candidates are tested on their ability to understand and apply a comprehensive collection of installation-specific information. Achieving your BICSI Installer 2, Optical Fiber Training designation will demonstrate your ability to:

- · Successfully interpret drawings, plans and specifications.
- Properly test and troubleshoot optical fibre installations.
- Discuss media selection and implications for implementation on the network.
- Make recommendations based on applicable codes, standards and best practices.
- Interpret the job plan and scope of work as well as perform retrofits and upgrades for existing infrastructure.

This course sets the groundwork for optical fibre-based structured cabling system installation. The course will open with an overview of professionalism, fibre transmission principles and the general safety practices related to optical fibre cabling. A significant amount of course time will then be spent on installation, splicing, termination and testing of optical fibre cable.

### Course Highlights:

This course provides multiple opportunities for hands-on practice. Activities include learning to:

- · Install a cleave-and-crimp style & scribe-and-crimp style optical fibre connector
- Perform a fusion and mechanical splice
- Test an optical fibre link
- Evaluate an optical time domain reflectometer (OTDR) trace

#### Knowledge & Skill Requirements:

Participants must be able to:

- Distinguish between different colours
- · Possess manual dexterity to complete fine motor tasks
- · Stand for extended periods of time (e.g. 30 minutes)
- · Climb ladders & lift and carry items weighing upwards of 22.7kg (50lb)

# WHAT'S GREAT ABOUT THIS COURSE?

This course provides the learner with more advanced installation skills and a deeper knowledge of structured cabling systems and optical fibre cabling.

### About This Course:

- 5 1/2 day course
- 35 CECs

#### Who Should Attend:

- ICT installers with at least one year of verifiable cabling experience
- Anyone who wishes to expand their knowledge of the industry, learn new fibre installation skills and continue to advance professionally
- Level 2 Copper Installers seeking the BICSI Installer 2, Optical Fiber Training credential
- Individuals planning to sit the BICSI Installer 2, Optical Fiber Training exam
- · Level 1 Installers seeking the BICSI Installer 2, Optical Fiber Training credential

### **PREREQUISITES & PREPARATION**

BICSI recommends that all students who take this class have at least two years of current ICT industry installation experience within the last five years. For all individuals who plan to take the exam after the class, the two years experience is a requirement for the exam, not a recommendation.

As the skills in this course build on the basic skills and knowledge that an installer is likely to acquire during the first two years on the job, students will be expected to have basic knowledge of optical fibre cabling media and to know how to perform entry-level cable installation tasks prior to enrolling in this class.

### TE350: BICSI Technician Training

This course provides the necessary skill-set of a structured cabling systems technician. A significant amount of course time will be spent on troubleshooting copper and fibre cable installations. In addition, this course will cover project planning and implementing at the technician level. Additional topics will include site safety, site surveys, blueprint reading, bonding and grounding (earthing) and fire-stopping practices.

### Course Highlights:

This course provides foundational knowledge for entry-level installers including:

- Interpret blueprints
- Apply a standards-compliant labelling scheme (e.g. ANSI/TIA-606)
- Troubleshoot a UTP link/channel with a certification test set
- Troubleshoot an optical fibre channel with an optical time domain reflectometer (OTDR)

#### Knowledge & Skill Requirements:

Participants must be able to:

- Distinguish between different colours
- · Possess manual dexterity to complete fine motor tasks
- Stand for extended periods of time (e.g. 30 minutes)
- Climb ladders & lift and carry items weighing upwards of 22.7kg (50lb)

# WHAT'S GREAT

# ABOUT THIS COURSE?

This course will help students successfully lead an installation group or team using project management skills.

### About This Course:

- 5 1/2 day course
- 35 CECs

### Who Should Attend:

- · Highly experienced ICT installers with at least three years of verifiable cabling experience
- Anyone who wishes to expand their knowledge of the industry, learn new skills and continue to advance professionally.
- · Individuals planning to sit their BICSI Technician Training exam

### **PREREQUISITES & PREPARATION**

BICSI recommends that all students who take this class have at least three years of current ICT industry installation experience within the last five years. For all individuals who plan to take the exam after the class, this is a requirement, not a recommendation.

This course builds on the skills and knowledge covered in the BICSI Installer 2, Copper Training and BICSI Installer 2, Optical Fiber Training courses. Although completing these courses prior to attending isn't a requirement, BICSI highly recommends that students complete these.

# Networks Centre Company Profile

Networks Centre is one of the UK's leading Distributors of end-to-end Network Infrastructure offering a range of services and solutions:

- Data Centre Solutions
- Enterprise Networks
- Industrial Connectivity
- Intelligent Infrastructure
- Training Services

- Wireless and Security
- CISCO Solutions
- UPS Systems
- Test & Measurement
- Hire & Lease

For more information visit www.networkscentre.com

### How to find us:

Networks Centre Training Academy is based in Ashington near Pulborough, West Sussex. We're 35 minutes from Gatwick Airport and an hour from London.

#### Our Head Office address is:

Networks Centre Training Academy, Head Office, Bentley House, Wiston Business Park, London Road, Ashington, West Sussex, RH20 3DJ

#### Travelling by road

Networks Centre is located in Ashington near Pulborough in West Sussex. For Sat Navs use postcode RH20 3DJ

#### Travelling by air

We're located 30 minutes from Gatwick Airport. Leave Gatwick on the M23 southwards leaving at Junction 11 onto the A264, then onto the A24 towards Worthing.

#### Travelling by train

Pulborough has direct links from London Victoria, and Gatwick Airport. Once at Pulborough station, take a short taxi ride to Networks Centre Training Academy.

### Places To Stay

West Sussex provides a host of Hotels and B&B's located near local amenities & transport hubs. We understand the importance of comfort and location whilst training. Networks Centre Training Academy recommends a selection of accommodation situated near our facility. We advise all individuals to book in advance to secure your preferred option. The below are featured just as a sample of the many hotels and B&B's to suit all tastes in the area.

#### The Roundabout Hotel

The Roundabout Hotel is located 10 minutes away from Networks Centre Training Academy. This 4-star country hotel in a Tudor-style home is incredibly comfortable offering 24 en-suite rooms, each with its own individual character and the best in modern amenities, including flatscreen televisions and WI-FI.

To book, contact The Roundabout Hotel on:

+44 (0) 1798 817 336 www.roundabout.southcoastinns.co.uk

### The Old Tollgate Hotel

The Old Tollgate is a 10 minute drive from Networks Centre Training Academy. This 3-star hotel offers free WI-FI and on-site parking with rooms providing en-suite bathrooms.

To book, contact The Old Tollgate Hotel on:

+44 (0) 1903 879 494 www.oldtollgatehotel.com



### **CONTACT INFORMATION**

#### We're here to help!

Networks Centre Training Academy has a dedicated Customer Service team who can advise on hotel bookings and local services.

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