

PLI-16-510

nbn™ COPPER

CABLE JOINTER

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## nbn™ COURSES

PERPETUAL LEARNING INSTITUTE offers a comprehensive range of nbn™ courses to equip you with the necessary skills and knowledge required to work on the nbn™ network

PERPETUAL  
LEARNING  
INSTITUTE is  
a Nationally  
Approved Training  
Provider of  
Telstra™ & nbn™

Contact us today  
for full details



This course is designed for individuals with moderate experience and ensures that learning outcomes can be applied immediately to field activities using our advanced real-world, hands-on learning environments.

On completion, learners will have the confidence to build common network infrastructure including connecting the node to the Telstra™ copper network under all scenarios including a variety of node types and pillar integration techniques. In addition this course will ensure learners can confidently complete pillar compressions, active cable cut overs as well as testing requirements for service activation.



### BOOK ONLINE

Information is subject to change  
For the most current information and training schedule, please visit : [www.perpetual.edu.au/book](http://www.perpetual.edu.au/book)



### ACCREDITATIONS

Perpetual Learning Institute Pty. Ltd. is a nationally Registered Training Organisation (RTO code: 40809)

Perpetual Learning Institute Pty. Ltd is also a Nationally Approved Training Provider (ATP) of nbn™ & Telstra™



APPROVED

## COURSE OUTLINE



### Overview of nbn™ Architectures

- Overview of FTTP – Fibre To The Premise
- Overview of FTTB – Fibre To The Basement
- Overview of FTTN – Fibre To The Node
- Components associated with FTTN architectures
- Service delivery overview for FTTN networks
- Working safely in the telecommunication environment

### Introduction to Copper Cabling

- Copper cable architecture and transmission theory
- Copper cable types, gauges and insulation types
- Overview of Telstra's™ cable records systems
- Overview of xDSL technologies

### Copper Network Detailed Overview

- Detailed overview of Telstra's™ copper CAN Architecture (Customer Access Network)
- Overview of Telecommunications pit & pipe infrastructure
- Copper network tooling and equipment
- Detailed overview of copper cabling stripping
- nbn™ copper network construction practices

### Copper CCU Pillars

- Detailed overview of CCU 900 & 1800 pillar types and technical guidelines
- Overview of retrofit pillar deployments and technical guidelines
- Pillar jumpering standards and methodologies
- Pillar extensions – CCU 900 to 1800
- Pillar compression techniques and methodology
- Overview of cable records – NPAMS

### Overview of nbn™ Nodes

- Overview of Alcatel's nbn™ Node
- Overview of CommScope nbn™ Node
- Overview of DPU's (FTTC)

### Cable Termination Methods – Detail (nbn™ specific)

- Overview of copper cable termination standards and practices (nbn™ focussed)
  - Quante
  - R&M (Madisson)
  - Krone
  - Validating cable termination quality

### Copper Cable Joint Enclosures – (nbn™ focussed)

- Detailed overview of copper cable joint enclosures
  - HSOJ
  - Inline joints (Xaga 550 & 1000)
- Cable cut over techniques and tooling
- Cable jointing – Picabond / AMP Stack / Scotchlocks
- CPAS and joint air seals – Mains cable

### Network Validation – (nbn™ focussed)

- Detailed overview of the equipment and techniques used to test the performance of the copper network
- Cable pair identification techniques
- Cable fault methodology and location principles
- Validating POTS (Telephone) line performance
- Lines Test Set 2 (LTS2)
- TDR testing (EXFO Max-635) – Advanced copper testing

### Practical Exercise

- Build HSOJ using 50 pair copper cable
- Build 200 pair to 2 x 100 pair Xaga joint (Cutover)
- Build 2 x 100 Quante pair termination units in CCU pillar and Node
- Complete pillar compression and extension
- Complete joint with CPAS air seal (Xaga 1000)

### Course Assessment

- Theoretical assessment
- Practical assessment

## INDUSTRY PROBLEM

- With the deployment of the nbn™, Australia now needs additional skilled workers to construct the different network architectures.
- New network architectures and technologies require the development of new skills and knowledge to ensure success.



## PERPETUAL LEARNING SOLUTION

- Working as an nbn™ Approved Training Provider, PERPETUAL LEARNING INSTITUTE has enhanced our traditional courses to align directly to the skills needed for the nbn™ rollout.
- The development of carefully constructed skill based programs is where we excel – the art of training.
- Unlike other training organisations which focus primarily on technology, PERPETUAL LEARNING INSTITUTE is structured toward Field Operations staff. Technology theory is combined with large quantities of practical exercises to reinforce the learning process.
- PERPETUAL LEARNING INSTITUTE is the market leader with regards to hands on practical training that is supported by our real world learning simulators – “We bring the field environment to you”.



## COURSE INFORMATION

### Course Locations:

Melbourne, Adelaide,  
Sydney, Hobart,  
Canberra,  
Cairns,  
Brisbane,  
Darwin and Perth



Location and timing will be advised at enrolment

Class Size: 10 - 12 students

Learners are required to complete a portfolio of evidence to achieve certification of Units of Competency listed below.

### Included:

All materials used for practical exercises, technical manuals for each attendee, test equipment, emulation environment.

1 week phone support.

## WORK ON THE nbn™

There are specific technical competencies that must be attained prior to commencing any type of work on the nbn™.

The following table shows the relevant Units of Competency that will be achieved on successful completion.

Once complete the student can formally gain accreditation on nbn's™ workforce compliance platform enAble™ (<https://enable.nbnco.com.au/>)



### Units of Competency provided by PLI-16-510

Unit Code	Unit Name
ICTTEN302	Install telecommunications network equipment
ICTCBL215	Joint metallic conductor cable in the access network
ICTCBL317	Cut over metallic conductor cable in the access network
ICTTEN303	Locate, identify and rectify recurrent network faults
ICTCBL318	Install & cutover metallic conductor cable to access network cabinet
ICTCBL319	Rearrange large size copper cable