

PLI-08-070

SDH TECHNICAL

PRINCIPLES

TRANSMISSION

PERPETUAL LEARNING INSTITUTE provides a comprehensive syllabus that addresses critical practices pertaining to Transmission technologies within the Telecommunications SDH/TDM access networks.

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

**Contact us today
for full details**



Designed for all skill levels, this course provides a detailed examination of the telecommunication core digital transport technologies. Attendees will be presented a detailed examination of transmission fundamentals, PDH, SDH and Next Generation SDH, OTN and WDM networks, plus a practical demonstration of SDH and OTN test procedures.

The topics will include key differentiating elements of PDH, SDH, NGSDH and OTN for efficient transmission of variant client signals including Gigabit Ethernet, ATM, Fibre Channel, STMn and ODUk.

Attendees will also be provided with relevant information on how SDH integrates into large scale networks and associated technologies including OTN and DWDM.



BOOK ONLINE

Information is subject to change
For the most current information and training schedule, please visit : www.perpetuallearning.com.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

PLI-08-070-A

Introduction to Transmission Technologies

- Digital transmission fundamentals
- PCM encoding and transmission
- Transmission network synchronisation
- Telecommunications network architecture
- Introduction to PDH and SDH



PLI-08-070-B

PDH Technical Principles

- What is PDH, its capabilities and disadvantages
- Framing standards G.703 and G.704
- Alarms and error performance
- Evolution of SDH and PDH into today's networks

PLI-08-070-C

SDH Technical Principles

- What is SDH and its advantages
- International standards – SDH/SONET
- Deployment strategies using SDH
- SDH multiplexing concepts
- Bit rates and frame structure (up to 40G).
- Transporting application data using virtual
- Containers and concatenation

- SDH circuit protection and redundancy functions
- Circuit management alarm information functions within SDH
- Element management
- Packet based technology integration
- (Ethernet) using SDH transport
 - LCAS
 - VCAT
 - GFP
- FEC G.709 transmission standards
- SDH as it relates to CWDM and DWDM

PLI-08-070-D

Overview of SDH Commissioning and Acceptance Testing

- SDH BERT testing
- SDH synchronisation and pointer tests
- ASDH alarm and error performance
- SDH circuit protection and latency testing

PLI-08-070-E

Practical Exercises

- SDH testing and commissioning

PLI-08-070-F

Course Assessment

- Theoretical 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

Duration: 2 days

Included:

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

1 week phone support.