



OUTLINE: STRUCTURED CABLING PROGRAMME

The Structured Cabling Course delivers innovative network infrastructure solutions with real-world experience. This course aligns to the Panduit Authorized Installer (PAI) global certification and covers basic voice and data cable installer knowledge, how to build and administrate the physical layer of network infrastructure, and deeper understanding of the networking devices that this layer interconnects. Participants can become cabling installers, cabling designers or advance in other areas of networking.

Course objectives

After completing this course, participants shall be able to:

- ◆ Gain in-demand Technology skills for designing, building and maintaining networks.
- ◆ Provide design requirements on the physical aspects of voice and data network cabling and installation.
- ◆ Perform Documentation, Design and installation issues whilst observing laboratory safety and on-the-job safety, as well as working effectively in group environments.
- ◆ Gain familiarity with cabling issues related to data and voice connections, media and transmissions practices, and cabling customer support.
- ◆ Articulate cabling and networking industry standards as well as issues pertaining to emerging technologies.

Target Groups

- ◆ Network Administrators/Engineers.
- ◆ System maintenance and Support Staff
- ◆ Computer science / IT college graduates
- ◆ Computer networking aspirants

Course Outline

. Cabling and Safety Overview.

- Introduction to Cabling., The Cabling Job Market
- Safety Codes and Standards for the United States.
- International Safety Codes and Standards. Safety around Electricity.
- Lab and Workplace Safety Practices.

2. Introduction to Networking.

- What Is a Network? , Network Topologies.
- OSI Model and functions.

3. Signals and Wires.

- Signal Transmission.
- The Basics of Electrical Signals.
- Electronic Characteristics of Cables.
- Optical Theory, Wireless Systems Theory.
- Digital Subscriber Line Systems (xDSL)
- High-Bandwidth and Backbone Signals.

4. Copper Media.

- Copper Cable Basics.
- Twisted-Pair Cables and Terminations.
- Twisted-Pair Cable Fundamentals.
- Other Twisted-Pair Configurations.
- Coaxial Cable, Outside Plant Cables.

5. Fiber-Optic Media.

- Fiber-Optic Cables, Fiber-Optic Enclosures.
- Advantages and Disadvantages.
- Construction, Transmission. Connectors.
- Testing Fiber-Optic Cables.

6. Cabling Standards.

- Introduction to Cabling Standards and Codes.
- U.S. Codes. U.S. Standards. Canadian Standards.
- Australian and New Zealand Standards.
- National Standards from Around the World.
- European Standards., Evolution of Standards.
- National Standards from Around the World.

7. Structured Cabling.

- Structured Cabling Systems., Demarcation Point.
- Telecommunications and Equipment Rooms.
- Telecommunications Room Equipment.
- MCs, ICs, and HCs. Work-Area Cabling.

8. Tools of the Trade.

- Tools of the Trade., Material Handling.
- Professionalism.

9. Cable Installation Process.

- The Installation Process, Requests for Proposals.
- Prebid Meeting and Bid Creation.
- Requirements Gathering , Labor Cost Calculation. Material and Labor Issues.
- Contract Development, Negotiations, and Planning.
- Communication and Conflict Resolution.
- Software Tools. Design Documents.

10. Cabling Rough-In.

- Rough-In Phase Basics., Rough-In Support Tools.
- Horizontal Cable Installation., Vertical Cable Installation.
- Roughing In Other Cable Types, Firestops.
- Upgrades and Retrofits.

11. Trim-Out Phase.

- The Installation Process.
- Cable Management , Terminating Copper Media.
- Terminating Fiber-Optic Cable , Patch Panels.

12. Finish Phase.

- Testing and Troubleshooting Cable.
- Cable Certification and Documentation.

13. Customer Support Phase.

- Cabling Project Completion , Customer Support.
- Determining Upgrade Opportunities.

14. The Future of Cabling.

- Demand for Bandwidth.
- Vertical Market Drivers and Applications.
- Emerging Network Technologies.
- Emerging Cabling and Network Technologies

Course Duration, Structure

◆ Teaching Model

- Instructor-led training theory & Labs
- Guided Practical's on latest Cabling Equipment and tools
- Online access to Cisco's learning material
- End of chapter tests and Final tes
- Field Trips & Projects

◆ **Duration:** 5 Days, 9:00 am - 4:00 pm

◆ **Fees :** 35,000 Ksh

Facilities & Instructors

Our Certified **Regional** Cisco Academy abounds in state-of-the-art equipment as recommended by Cisco. Our instructors are Certified Cisco Academy Instructors (CCAI) who have also attained the CCNP certification and continuously receive advanced training in networking. The instructors have been trained at the only CATC in AFRICA, Nelson Mandela University and also in the USA.

AFRALTI makes the BOLD claim that it offers the best quality in training and has not only trained individuals but corporate and instructors from the other local academies that it administers.

AFRALTI's status and quality can be validated by the Cisco Academy Area manager at the Cisco offices in Nairobi.

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