Course Overview

T1/T3 fundamental course introduces by CODEC Networks give basic understanding on how to select, integrate, and configure T1 and T3 services. Explore tariffs and service options before making a purchase decision, and learn about frame formats and how data is transmitted over T1/T3.

This course also benefits candidates in Understanding the marketplace and vendor choices.

Also explores various T1 applications, implementation and operation and evaluate T1 voice and data interface options, applications and performance criteria.

Course Overview and Objective

After completing this course, students will learn:

- The fundamentals of T1, T3 and SONET
- Build and operate a full end-to-end T1 facility at each workstation
- Evaluate T1 voice and data interface options, applications and performance criteria
- Monitor framing and signalling formats.
- Discuss the technical, financial and operational differences between implementation of Fractional T1, T3 and other WAN and access technologies
- Master the five main T1/T3 activities - installation, activation, acceptance testing, troubleshooting and network synchronization
- Identify and resolve system failures on a fully operational T1 network
- Develop troubleshooting skills in 3 main problem areas: Span, demarcation and customer premises equipment
- Isolate problems methodically and eliminate "finger pointing"
- Understand the meaning of various alarms and what action to take to resolve problems.

Pre-Requisites

Basic knowledge of networking fundamentals, data transmission principles and the OSI 7-layer model is required prior to attending this course.

Introduction to Data communications and Networking is also recommended as a minimum level of experience.

Who should attend?

Candidates who are require developing a thorough understanding of digital transmission technology, equipment operation and terminology.

This course benefits the candidates who are planning to pursue his/her career in following functional areas: network design, network management, network operations, network engineering and information systems.

This course benefits Field Installation / Maintenance personnel, Head End (Central Office) technicians and supervisors who require knowledge and understanding of T1 and T3 circuits.

The Specified Program Enables Participants To Seek Jobs In:

- Network Administrator
- Network Analyst or Architects
- Network Managers
- Network Engineers or Operators
- Network Planning & Optimization Lead / Specialist
- Technical Staff

Course Duration: 2 Days (Sixteen Hours Workshop)
Course Content

- Market Motivation
- Business Applications
- Vendors T1 Networking
- The Development of the T-Carrier System
- T1 Fundamentals
- Digital Networking Standards
- Extended Super frame Format
- T1 Equipment
- T3 Networking
- T3 Formats, Standards, and Protocols
- T1 and T3 Equipment, Applications

- Media Use for T1 and T3
- Applying analog and digital techniques
- T1/T3 Introduction
- T1/T3/E3 Components
- DS1 and DS3 Characteristics
- Signal Levels and Standards
- Channel Service Units (CSU)
- Data Service Units (DSU)
- Combined CSUs/DSUs
- T1Multiplexers