

Course Name: T3/DS3 for Telecom Technicians

Course Overview: This class is focused on teaching technicians and engineers with T1/DS1 experience the basics of the T3/DS3 technology as well as ensuring they understand proper installation and maintenance techniques. Partner this one day course with TESSCO's DS1/T1 testing concepts course for a great three day program. This course focuses on proper troubleshooting and installation practices as well as an overview of DS3/T3 fundamentals. Several labs are included to ensure the student can operate T3 test equipment as well as efficiently test and monitor DS3 systems. The course is designed to detect potential problems as well as detailed signal analysis to ensure minimal down time.

Course Length: 1 day

Who should attend:

- Field Service Technicians
- Switch Technicians
- Design Engineers
- Managers/Field Supervisors
- Field Engineers

You will learn:

- DS1/DS3 Industry Overview
- DS1 Technology Review
- DS3 Technology
- DS3 Network Equipment
- DS3 Test Equipment
- T3/DS3 Installation techniques
- T3/DS3 Maintenance and Troubleshooting Techniques
- Overview of Channelized Testing Concepts

Prerequisites: None

Course fee:

- 1 day course at a TESSCO Location \$475 per person
- 1 day course at your location \$3000 for up to 10 attendees

Customizable: Yes

Course Content:

DS1/DS3 Overview

- Wireless applications

- Basic speeds/abilities

DS1 Review

- Formatting the signal
- Equipment
- Basic testing concepts

DS3 Technology

- Multiplexing the signal
- Framing the signal
- Coding the signal

DS3 Network Equipment

- Multiplexers, DSX-3, DCS... Connections/Cable
- Provider's equipment
- Demarcation

DS3 Test Equipment

- Types of test equipment
- Equipment operation/setup
- Connections to a T3/DS3
- Testing techniques
- Test parameters

Lab1 – Test Equipment

- Product Overview
- Loop Test

Installing DS3s

- BERT
- Recommended Stress patterns
- Test Access points
- DS3 loop back Testing
- End/End testing
- Verifying service parameters

Lab2 – Test Equipment

- BERT
- Stress Patterns
- Measurements
- Signal Analysis

Maintaining DS3s

- Test Access points
- Monitoring DS1s/channels
- Monitoring signal quality
- Monitoring Alarms and Errors

Lab 3- End/End Testing

- Verify signal/framing
- Analyze problem

Channelized Testing

- Monitoring DS1s from DS3s
- Monitoring DS0s from DS3s
- Monitoring Fractional T1s (FT1s) from DS3s
- Drop and Insert testing