

# Installing and Maintaining T3/DS3 Systems



<b>Course Length</b>	2 days
<b>Course Code:</b>	NFSDS301
<b>Prerequisites</b>	None. A basic understanding of telecommunications transmission principles will be useful for students taking course.
<b>Course Overview:</b>	This course focuses on proper troubleshooting and installation practices as well as an overview of DS3 fundamentals.

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\*This course can be customized or combined to meet specific requirements

\*Second day can be added for extensive hands-on applications

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## Course Outline

### 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



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## **DS3 Test Equipment**

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

## **Installing DS3s**

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

## **Maintaining DS3s**

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

## **Channelized Testing**

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