

# Introduction to Data Technologies

<b>Course Length</b>	3 days
<b>Course Code:</b>	7001
<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 introducing the student to data technologies and equipment through a unique hands-on approach. Students will learn data while actually cabling networks, installing equipment and doing basic setup and testing. (The student will basically wire an Ethernet LAN and transport it over a Frame Relay and/or ATM Network. This network will then be used to pass TCP/IP and SMTP traffic over the Internet.)

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

## Course Outline

### Data Industry

- Trends
- Drivers

### OSI Model

- Purposes
- Layers
- LAN vs. WAN

### Purpose of OSI Model

### Physical Layer 1

- T1/DS1
- DS3 SONET
- DWDM



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## Data Link Layer 2

WAN technologies  
ISDN D channel  
Frame Relay  
ATM  
SS7

LAN technologies  
Ethernet  
Token Ring  
ATM

## Network Layer 3 Technologies

ISDN  
IP  
IPX  
AppleTalk

## Transport Layer 4 technologies

TCP  
UDP

## Upper Layers (5, 6 and 7)

Overview of technologies and functions

## Overview of Basic Equipment

Router  
Switch (LAN and WAN)  
Hub/Repeater  
Multiplexer  
Bridge  
Firewall  
Gateway  
Personal Computer  
CSU/DSU  
NIU/Smart jack  
DSL Router/Modem