

Intro to Telephony

Course Length: Three (3) days

Course Code: NFSTEL02

Prerequisite: None, however a basic understanding of the telecommunication industry will be helpful.

Course Overview: This course is designed as an overview of the telecommunications industry for management and other key staff personnel. Students attending this course will obtain the knowledge to discuss major events, standards, players and technologies that have formed a truly exciting industry. Key emphasis will be put on using, evaluating and ensuring proper return on investment (ROI) as well as assessing network requirements and evaluating vendors and carriers

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

Course Outline

Brief History of Telecommunications

- Where it all started
- Government Intervention
- Competition in the industry
- Convergence
- Major technological advances
- Fiber Optics bring Bandwidth
- The data revolution
- Communications through the air
- Where are we headed?

Standards/Regulatory Bodies

Telecommunication basics

- Analog v/s digital
- LANs, WANs, and MANS
- Bandwidth v/s speed
- Multiplexing concepts

Overview of the OSI model

Purpose
Layer descriptions

Major players

RBOCS/ILECS
CLECs/DLECs/ICPs
ASPs
IXCs
End Users
ISPs
Wireless Carriers
Government
Manufactures/vendors

Areas of a basic network

CO/MTSO/Main Office
OSP/Links/Local Loop/Media
CPE/Users
NOC/Control Center

Traditional voice systems

Operated assisted
POTS
In-band Signaling
PSTN

PBX systems Modern voice systems

Out-of-band signaling
ISDN
SS7
TR/GR-303

Transport Systems

T and E Carriers
xDSL
Wireless Systems
Fiber Optics
Broadband Systems
SONET/SDH
WDM/DWDM

Traditional data systems

Token Ring
Ethernet

Modern data systems

Cells, Packets and Frames



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ATM and Frame Relay
The Internet (IP)
Wireless networking
Internetworking

Network Support Systems

OSS
BSS

The Future

Key players and trends
Emerging technologies
Projected networks



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