

# Telecom Training: Telecommunications Concepts & Technologies (TELCO101, 4 jours)

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## Description

The course Telecommunications Concepts & Technologies (Telecom Training) is a comprehensive exploration of the components that make up a modern networking and telecommunications infrastructure. This course begins with an overview of the hardware components of the network and a general discussion of IP based networking including IPv4 & IPv6. The training continues with a high-level discussion of wireless networking, virtual private networks & Voice over IP technologies. The course concludes with a complete troubleshooting lab.

## Tarifs

- Tarification: \$3,750/person
- Rabais de 10% lorsque vous inscrivez 3 personnes.

## Plan de cours

### Network Fundamentals

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An Overview of a Typical Network's Topology  
Comparing LANs and WANs  
Corporate Network Core Components  
Network Protocols: TCP/IP and more  
Inter-Connecting Networks: Routers, Switches and Bridges  
An Introduction to IP Addressing and Subnetting  
Connecting Networks to the Internet  
Internet Addressing  
TCP/IP Networks and Services  
A Word about Service Oriented Architecture  
About Cloud Computing

### Wireless Technology Fundamentals

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The Frequency Spectrum  
Wireless Communication Primer  
Spread Spectrum  
Global System for Mobile and General Packet Radio Service  
Code-Division Multiple Access  
GSM Versus CDMA  
3G Cellular Systems  
2G Mobile Wireless Services  
Wireless Technologies Landscape  
802.11 Wireless LANs  
Bluetooth  
Ultra-Wideband  
Radio-Frequency Identification  
Wireless Metropolitan Area Networks  
Satellite  
Wireless Sensor Networks

### Wireless Networks

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Bluetooth (802.15.1)  
Wi-Fi (802.11)

WiMAX (802.16)

Cell Phone Technologies

Virtual Private Networks (VPNs)

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VPN Overview

VPN Solutions Overview

VPN Components

Connecting to LANs with VPNs: An Analogy

VPN Protocols

VPN Types

VPN Security

Voice-over Internet Protocol (VoIP)

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Voice vs. Data: Separate yet Convergent

VoIP Overview

Why Switch to VoIP?

Using VoIP on Microsoft Windows

VoIP Telecom Network Foundations

Replacing the Voice Circuit with VoIP

VoIP Packets, Headers and Components

Replacing Call Signaling with VoIP

About Voice QoS

Troubleshooting Networks

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Troubleshooting Networks: A Proposed Methodology

Network Troubleshooting Tools

Troubleshooting Client to Client Communications

Troubleshooting Internet Connectivity

Troubleshooting Wireless Access

Other Troubleshooting Tips and Techniques

Using and Understanding Network Analyzers

(Practical Lab) - Putting together a Wired and Wireless Network from Scratch

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