

## Course Description

With the expansion of telecommunications from phone systems into DSL, Internet Access, IP Television and Triple play networks, telecom technicians need to use Laptop PCs to test and validate services. PCs are becoming more than just a way to surf the Internet and are becoming vital service testing tools. As such technicians need a solid background in using and maintaining laptop PCs. They must also be able to interface with customers who use services and validate their configuration to link to services.

This course is aimed at giving technicians a solid grounding in how Laptop and desktop PCs work with Windows. The course will explain the basic architecture of PCs, their memory, disk layout and interfaces. It will teach attendees how windows and user programs, services and features are installed and maintained, how to select drivers for new hardware such as Wireless adaptors, how to configure networking and routing and how to use and test key user services. Technicians will need to move test files and software between platforms as well as upload and download files to the Internet. These key skills will be taught and practiced.

Many customers will be unfamiliar with firewalls and anti-virus software. The course will explain the limitations of this software and how to turn on and off Windows XP security features. The concepts of system registry and system restore will also be explained.

## Students Will Learn

- **Describe The Architecture Of PC Platforms For Technician Testing And User Deployment**
- **Compare Laptop And Desktop Pcs**
- **Appreciate How Disks, Folders And Memory Should Be Organized**
- **Identify How Systems Software Services Function And Monitor What Software Is Running**
- **Install And Uninstall Software And Windows Components**
- **Configure Wired And Wireless Windows Networking**
- **Share Files And Services**
- **Upload And Download Files And Software To The Internet**
- **And More...**

## Target Audience

Technicians, contractors, union craftsman, electricians, installers, engineers, and anyone involved in installing, maintaining, troubleshooting CPE (Customer Premise) telephone installs, Internet services, and any other networking services and support issues.

## Course Outline

### **Module I: Introduction to PC Hardware**

Components of a PC

Comparing Desktop and Laptop Hardware

Processors and Buses

Disk Partitions and formats

Internal and External Disks

USB Interfaces

Network Interface cards

Graphics Cards

Sound Interfaces

### **Module II: Operating System Components**

Functions of Operating Systems

Windows, MAC and Linux compared

Key Windows Components

Organization of system processes

The Desktop

Quick Launch bar and task bars

The system tray

Configuring your desktop

Ways to organize your Laptop

Using Task manager to monitor processes and memory

Windows Directory

Windows System Directory

Installing and Uninstalling Programs

Users and passwords

System Start-up and closedown

System Registry

System Restore

### **Module III: Running Programs and Services**

Methods of running programs

Starting and stopping programs

Running Programs from the Command Prompt

Configuring command prompt window for troubleshooting

Key windows commands

Creating shortcuts to start programs

Organizing shortcuts in the start-up and program list

Starting and stopping services

### **Module IV: IP Networking In Windows XP**

Fundamentals of IP Addresses

Subnet Masks and Network Prefix

Default Routers

Dynamic IP addressing with DHCP

Configuring static addresses

Displaying IP addresses and routing tables with IPCONFIG and NETSTAT

DNS Servers

Testing services with PING, TRACERT and NSLOOKUP

### **Module V: Installing External Hardware**

External hard drives

Memory Sticks and flash drives

External networking

Installing an external device

Installing and updating Drivers

## **Module VI: Microsoft Networking for File Sharing**

Naming your PC

Domains and Working groups

Turning on and off file sharing

Moving files between machines

Mapping Network Drives

Windows Explorer

Web Browsers

FTP transfer

HTTP download

## **Module VII: Key Technician Laptop Tools for Troubleshooting**

Organizing your Laptop as a testing tool

What to include

What to avoid

Protocol Analyzers

Throughput and Access Speed Testing

FTP and TFTP servers

Terminal Emulators

## **Delivery Method**

Instructor led with numerous Hands-On labs and exercises.

## **Equipment Requirements**

**(This apply's to our hands-on courses only)**

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

### **Course Length**

3 Days