

COMPUTER HARDWARE & NETWORKING COURSE SYLLABUS (A+):

Durations: 30 Hours, 10 classes

Lesson 1: Computer Hardware & Assembling

- What Is Computer and history
- Information On PC & How It Works
- Basic Electronics & Measuring Instruments
- Architecture Of The System
- Hard drive disk details
- Computer Hardware details
- Personal Computer Components
- System Unit Components
- Storage Devices
- Personal Computer Connection Methods
- PC Assembling

Lesson 2: Installing and Configuring Peripheral Components

- Install and Configure Display Devices
- Install and Configure Input Devices
- Install and Configure Adapter Cards
- Install and Configure Multimedia Devices
- Install and Configure Storage Devices
- Install and Configure Power Supplies
- Install and Configure Memory

Lesson 3: Installing and Configuring Operating Systems and Software

- Install Microsoft Windows XP, 7, 8, 8.1, Server, Linux And Other
- How To Activate Or Genuine Windows
- Hard Drive Partition, Format,
- Windows Password Change Or Remove
- Add Devices To Windows
- Optimize Windows
- Control Panel Details
- Antivirus Software
- Third Party Software Setup
- how to setup software serial, patch , crack
- Software Uninstall
- Virtualization Software
- Driver Software
- CD/DVD Write ISO Burn

Lesson 4: Hard Drive Backup Restore & Recovery

- HDD Partition Resize
- **Acronis Backup & Recovery Advance Server**
- **Hiren's Boot Cd**
- **ULTIMATE Boot 2014**
- **Active Boot Disk**
- Hard Drive Recovery
- HDD Partition Recovery
- Folder & File Recovery
- Pendrive Recovery
- Memory Card Recovery
- Partition Magic
- Partition Manager Professional

Lesson 5: Maintaining and Troubleshooting Peripheral Components

- Maintain Microsoft Windows
- Trouble Shooting And Managing Systems
- Troubleshoot Display Devices
- Maintain and Troubleshoot Input Devices
- Troubleshoot Adapter Cards
- Troubleshoot Multimedia Devices
- Troubleshoot Storage Devices
- Troubleshoot Power Supplies
- Troubleshoot Memory

- Troubleshoot CPUs
- Troubleshoot System Boards
- Install and Configure Laptops and Portable Computing Devices

Lesson 6: Supporting Printers and Scanners

- Printer and Scanner Technologies
- Printer and Scanner Components
- Printer and Scanner Processes
- Install and Configure Printers and Scanners
- Maintain and Troubleshoot Printers and Scanners

Lesson 7: Network Technologies & Network Connections

- Network Concepts
- Network Communications
- Network Connectivity
- Internet Technologies
- How ISP Works, How Internet Works
- Create Network Connections
- Install and Configure Web Browsers
- Maintain and Troubleshoot Network Connections
- **Identify various types of networks** : LAN • WAN • PAN • MAN •

Lesson 8: Types Of Network Cables And Connectors , Network Devices, Their Functions, And Features.

- Fiber cable
- Twisted Pair
- Connectors: RJ-11, RJ-45
- Twisted pair Types: STP, UTP, CAT3, CAT5, CAT5e, CAT6, plenum, PVC
- Cabling: Straight And Cross Cable, Rollover Cable Making
- OSI Layer And Its Functions, TCP/IP Layer Explain
- IP class > Class A > Class B > Class C
- IPv4 vs. IPv6
- Public IP vs. private IP
- Static IP vs. dynamic IP
- Client-side DNS
- DHCP
- Subnet mask
- Gateway
- Protocols: DHCP, DNS, SMB, CIFS, SSH, SFTP, TELNET, SMTP, HTTP
- **Compare and contrast Internet connection types and features:**
 - Cable • DSL • Dial-up • Fiber • Satellite • ISDN • Cellular (mobile hotspot)
 - Line of sight wireless internet service • WiMAX
- **Network Devices, Their Functions, And Features.**
 - Hub, Switch, Router, Access point, Bridge, Modem, NAS, Firewall, VoIP phones
- **Use Appropriate Networking Tools:**
 - Crimper • Multimeter • Toner probe • Cable tester • Loopback plug • Punch down tool

Lesson 9 : Networking Sharing Configuring & Server Setup

- Workgroup Setup, Home Group, Public Group
- Windows Xp & Windows 7 File Share Setup
- PC Test By Ping
- Printer Sharing
- Drive & File Sharing
- FTP Server Create
- How Server Works(DNS, Mail, Proxy, Web Server)

Lesson 10 : Review full course & exam

- Computer Hardware Components
- Windows Setup & Partition
- How To Solve Computer Problem
- Networking Sharing & Problem Solve
- Exam 100 Marks (Written & Lab)

