Certificate in Networking (107) – Windows Client Networking (Vista)

Prerequisites: Basic knowledge in the use of Microsoft Windows Applications.	**Corequisites:** A pass or higher in Diploma in Information Technology or equivalence
Aim: Concepts, techniques, and skills to install and configure Windows Vista desktops; including a focus on installing, security, networking, how to install and configure a Windows Vista desktop that is secure on the network and ready for browsing. Learners will also cover concepts and techniques to successfully configure mobile computers and applications running Windows Vista; including configuration of the networking protocols and productivity applications that ship with Windows Vista. Learners will acquire skills to successfully maintain and troubleshoot Windows Vista computers; including the skills necessary to identify technical problems that can occur in an organisation's client computers; also focusing on the operating system, hardware, networking, security and applications. The course will also look at concepts and techniques to use a Windows Vista operating system image and application package deployment infrastructure to minimize the downtime at the Windows Vista client; including how desktop support technicians can use this infrastructure to improve support provided for new installations, single computer migrations, and single computer reinstallations. On completion of the course, learners will acquire ability to install and configure Microsoft Vista operating system; how to install and maintain a microcomputer (personal computer); steps used to set up a new or add options to a previously installed microcomputer; installation of internal options (memory, graphics, modems, etc.), as well as external options and devices (printers, monitors, communications, etc.); troubleshoot (identify and repair or have repaired) microcomputer problems; installation of a operation system, user accounts, desktop management, files and folders, hardware, displays, I/O devices and ACPI, storage devices, printers, network services, Internet Explorer, operating system resource management; upgrading and configuring the current Windows client, including troubleshooting, security, network connectivity and configuring and maintaining applications.	
Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.
Special Requirements: The course requires a combination of lectures, demonstrations, discussions, and hands-on labs.	

Intended Learning Outcomes:	**Assessment Criteria:**
1. Understand the deployment of Windows vista	1.1 Be able to analyse the business environment and select appropriate deployment method 1.2 Outline preparation of a clean installation or upgrade 1.3 Be able to perform post-installation tasks and troubleshoot issues 1.4 Analyse User State Migration Tool (USMT) and .xml control files 1.5 Be able to troubleshoot roaming user profiles and folder redirection issues
2. Understand devices, device configuration, device drivers and device installation restrictions	2.1 Be able to install and configure devices 2.2 Be able to resolve computability issues 2.3 Be able to configure device installation restrictions through Group Policy 2.4 Be able to use device manager
3. Understand the creation and implementation of Group Policy	3.1 Be able to configure Group Policy 3.2 Be able to use Group Policy Results Wizard and Reports 3.3 Be able to troubleshoot security configuration and policy setting issues

	3.4	Be able to use Group Policy to Deploy software
	3.5	Be able to create a Network Share for Distributing software via Group Policy
	3.6	Be able to use Group Policy to assign and publish packages
	3.7	Be able to install systems Management Server
	3.8	Be able to use Group Policy to upgrade or replace an existing application
	3.9	Be able to use Vista Applications
	3.10	Be able to troubleshoot Group Policy software deployment
4. Understand the configuration of Windows Internet Explorer Security	4.1	Outline Internet Explorer Security
	4.2	Be able to configure ActiveX Installer Service
	4.3	Be able to configure and troubleshoot security for Internet Explorer
	4.4	Be able to troubleshoot policy-setting issues
	4.5	Be able to configure and troubleshoot Internet Access
5. Understand Windows Vista Security issues	5.1	Be able to run Event Viewer tool
	5.2	Be able to configure the security Configuration and Analysis tool
	5.3	Be able to configure and troubleshoot software restrictions policies
	5.4	Be able to configure and troubleshoot Windows firewall issues
	5.5	Be able to use and configure Windows Defender
	5.6	Be able to configure Windows Defender Group Policy and troubleshoot Windows Defender issues
6. Understand problems related to authentication, user account control and access control issues	6.1	Analyse the User Account Control settings
	6.2	Be able to configure and troubleshoot User Account Control
	6.3	Outline the Principle of Least Privilege, consent user interface and secure desktop
	6.4	Compare and contrast Administrator vs. Standard user
	6.5	Be able to configure User Account Control Group Policy and troubleshoot policy settings
	6.6	Understand and be able to renew Smart Card Certificates
	6.7	Be able to configure and manage the Task Scheduler
7. Understand Updates and Windows Server Update Services	7.1	Be able to configure Windows Server Update Services Clients
	7.2	Be able to use Windows Diagnostic Infrastructure
	7.3	Be able to use the Reliability and Performance Monitor
	7.4	Be able to establish and monitor performance baselines using built-in tools

	7.5	Analyse the new technologies used in Vista to improve performance
8. Understand the configuration and securing of TCP/IP networks	8.1	Analyse IP addresses, subnetting and subnet masks
	8.2	Be able to configure TCP/IP network settings
	8.3	Be able to configure and troubleshoot DNS
	8.4	Be able to configure and troubleshoot DHCP
	8.5	Be able to configure and troubleshoot Wireless Networks
	8.6	Outline the securing of data with IPSec
	8.7	Be able to implement Windows firewall
	8.8	Be able to configure Virtual Private Network
	8.9	Be able to configure Remote Desktop through Group Policy
	8.10	Be able to configure NTFS permissions and File Sharing.

Recommended Learning Resources:
Windows Client Networking (Vista)

Text Books	• Microsoft Windows Vista Step by Step by Joan Preppernau and Joyce K. Cox. ISBN-10: 0735622698 • Windows Vista: The Missing Manual David Pogue. ISBN-10: 0596528272
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Windows Vista Client Operating System