Unit 124: Microsoft Windows 7, Configuring (70-680)

Unit code: Y/601/6797

QCF Level 2: BTEC in IT

Credit value: 6

Guided learning hours: 50

● Aim and purpose

Candidates for this exam operate in computing environments that use Microsoft Windows 7 as a desktop operating system in an enterprise environment. Candidates should have at least one year of experience in the IT field, as well as experience implementing and administering any Windows client operating system in a networked environment.

Candidates should be able to install, deploy, and upgrade to Windows 7, including ensuring hardware and software compatibility. Additionally, candidates should be able to configure pre-installation and post-installation system settings, Windows security features, network connectivity applications included with Windows 7, and mobile computing. Candidates should also be able to maintain systems, including monitoring for and resolving performance and reliability issues. Candidates should have a basic understanding of Windows PowerShell syntax.

● Unit introduction

This unit is a comprehensive introduction to the principles of Microsoft Windows 7 operating system support enabling a learner to explore the range of techniques and skills common to the utilisation of this operating system.

The unit explores the installation and configuration of the Windows 7 operating system, the creation of a system image, the configuration of devices, application, network settings, security and the monitoring/support of the Windows 7 operating System.

Microsoft link with a range of different partners to offer a range of learning resources, where learners and centres can access these through Microsoft's Academic learning programme. To attain a pass, learners must take the Microsoft 70-680 certification exam.

This unit will prepare learners to sit the Microsoft 70-680 certification exam, this unit is also assessed with BTEC merit and distinction criteria.

To view general information about Microsoft objectives please visit: https://www.microsoft.com/education/ MSITAcademy/default.mspx where the detailed scope and sequence for all certifications are available for anyone to download.

● Learning outcomes

On completion of this unit a learner should:

1   Install Upgrade, and Migrate to Windows 7

2   Deploy Windows 7

3   Configure Hardware and Applications

4   Configure Network Connectivity

5   Configure Access to Resources

6   Configure Mobile Computing

7   Monitor and Maintain Systems that Run Windows 7.

Unit content in relation to the Merit and Distinction Criteria

Installation: eg clean install, upgrade, user profile migration, system image capture, system image deployment, device configuration, application compatibility, application restrictions, browser settings

Installation environment: eg virtual machine, 'bare bones' installation, partitioned installation

Windows 7 features: eg IPv4 network settings, IPv6 network settings, firewall, remote management, shared resources, file and folder management, user account control, authentication and authorisation, bitlocker, mobility options, direct access, remote connections, windows updates, disk management resources, system management resources, performance settings.

Installation testing: eg user rights, system updates, firewall settings, network access, display settings, user settings

Different environments: eg more/less memory, faster/slower processor resource

Performance: eg usability, memory management, ease of installation, security, graphical quality, speed

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	**To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:**	**To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:**
Pass the Microsoft 70-680 certification exam. The centre will evidence this with a copy of the learners results, the learner MUST PASS at the minimum set by Microsoft.	**M1** plan the installation of a Windows 7 system [IE, CT]	**D1** critically Test the installation of Windows 7 features [IE, CT, SM]
	M2 implement the installation of a Windows 7 system on a selected installation environment [IE, SM]	**D2** compare the performance of Windows 7 on different environments. [SM, IE]
	M3 select and configure Windows 7 features. [TW, EP, SM]	

PLTS: This summary references where applicable in the pass criteria, in the square brackets, the elements of the personal, learning and thinking skills. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Microsoft courses and associated certifications are delivered as part of an academic programme available to centres in UK and Eire. Centres may only access this certification's associated discounts from within this programme are advised to seek guidance on what current courses comprise the study/delivery required for learners to access the certification.

If learners are taking Microsoft study as part of their BTEC programme, it is recommended that both programmes of study are integrated. Practical and theory tasks for the Microsoft programme can be integrated into the study required for the merit and distinction criteria within this unit.

The outcomes of this unit are synergic with the other Microsoft units as well as those offered by Cisco, CompTIA and VMWare, where there are considerable differences. This unit may be delivered in parallel or in sequence. Units in computer hardware, software installation, systems support and networking, that are both BTEC specific as well as from other vendors may be taught in conjunction with the Microsoft units to enhance the learners experience.

Outline learning plan

Microsoft as part of the their academy programme, provide learning plans and study guidance for their courses. Microsoft suggest an estimated 75 hours of delivery to attain the pass criteria, in line with QCF credit and notional learning hours. The notional hours for managed learning is set at 40 for learners to attempt the merit and distinction.

Assessment

To achieve a pass grade, learners must pass the Microsoft 70-680 examination.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
M1, M2	Install Windows 7	Learners will plan the installation of Windows 7 on an installation environment of choice.	Observation/Practical/Report/Presentation.
M3, D1, D2	Adapt the installed system	Learners will configure Windows 7 features and test/check the system after installation as well as compare the performance of Windows with different resources.	Observation/Practical/Report/Presentation. Suggestion, D2, may be accomplished by using different virtual machine settings and the learners could be encouraged to work in groups of three, with three different settings.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

To be completed, links to 6.1 of the NOS and may be co-presented with all other Microsoft modules

Essential resources

As members of the Microsoft academic programme, centres may choose to access a range of teaching and assessment practice resources. The technological requirement for this unit does not demand any more than the 'average' centre is already providing for a computer systems session, old computers, spare components, replacement parts will enhance the learning experience. Many installation versions of Microsoft products exist, that are easy to install in both desktop and server versions and now comparable in support and management terms to other popular operating systems. This unit can be delivered using virtual machines, where Microsoft Virtual PC may be used, or Oracle Virtual Box which can be run on a wide range of platforms.

Employer engagement and vocational contexts

Microsoft certification is internationally recognized by a diverse range of employers (from SME's to large corporations) as one of the principal certifications in systems support and maintenance.

Indicative reading for learners

For access to the Microsoft academic programme resources and more information on joining the programme, please visit https://www.microsoft.com/education/MSITAcademy/default.mspx

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are …
Independent enquirers	The pass criteria is set by an examination, the PLTS of self management and reflective learning is supported by the learner, taking personal study and revision in advance of the Examination.
Creative thinkers	
Reflective learners	
Team workers	
Self-managers	
Effective participators	

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are …
Independent enquirers	planning their windows 7 installation and installing the operating system, along with using the windows 7 commands to manage features
Creative thinkers	using windows 7 commands to manage features
Reflective learners	comparing the outcomes of the changes they have made to the features
Self-managers	using windows 7 commands to manage features.

Functional Skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	Installing the Windows 7 operating system and using the range of Windows 7 features
Manage information storage to enable efficient retrieval	Installing the Windows 7 operating system and using the range of Windows 7 features
Follow and understand the need for safety and security practices	Installing the Windows 7 operating system
Troubleshoot	Installing the Windows 7 operating system and using the range of Windows 7 features
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	Comparing the different Windows 7 environments
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	Comparing the different Windows 7 environments.