



National Unit Specification: general information

UNIT PC Passport: Introduction to IT Systems (SCQF level 4)

CODE F1GP 10

SUMMARY

This Unit is a mandatory Unit of PC Passport: Beginner but can also be taken as a free-standing Unit.

This Unit is designed to enable users to set-up and use the features of modern computer systems in day to day use. The candidate will be introduced to computers, the components that make up modern computer hardware and the features of Graphical User Interfaces (GUIs). They will be introduced to health and safety issues related to using a computer system and methods to protect personal data.

The Unit will develop a knowledge and understanding for anyone who wants to confidently use the basic functions of a computer system.

This Unit is suitable for candidates who:

- ◆ are undertaking the study of this subject for the first time
- ◆ wish to obtain a basic knowledge of computing as an interest subject

OUTCOMES

- 1 Identify features and uses of different types of computer systems and peripherals.
- 2 Identify potential risks, and solutions, associated with using computer systems.
- 3 Carry out a range of tasks using a Graphical User Interface (GUI).

RECOMMENDED ENTRY

Entry is at the discretion of the centre.

Administrative Information

Superclass: CA

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CREDIT VALUE

1 credit at Intermediate 1 (6 SCQF credit points at SCQF level 4*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

CORE SKILLS

There is no automatic certification of Core Skills in this Unit.

The Unit provides opportunities for candidates to develop aspects of the following Core Skill:

- ◆ Information Technology (SCQF level 4)

This opportunity is highlighted in the Support Notes of this Unit Specification.

National Unit Specification: statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Identify features and uses of different types of computer systems and peripherals.

Performance Criteria

- (a) Identify features and uses of different types of computer systems.
- (b) Identify features and uses of different peripherals of a computer system.

OUTCOME 2

Identify potential risks and solutions associated with using computer systems.

Performance Criteria

- (a) Identify possible causes of injury to users that may arise when using a computer system.
- (b) Identify solutions to potential health and safety issues associated with using a computer.
- (c) Identify potential risks related to stored personal data.
- (d) Identify solutions to risks related to data storage.

OUTCOME 3

Carry out a range of tasks using a Graphical User Interface (GUI).

Performance Criteria

- (a) Use a range of GUI features to operate a computer.
- (b) Use file management features to carry out a range of tasks.
- (c) Use the Help facility to solve a problem.
- (d) Customise the accessibility settings of a computer to meet user requirements.
- (e) Back-up and restore data using removable media.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required that candidates have achieved all Outcomes and Performance Criteria.

Candidates are encouraged to use the internet in any research, etc however the evidence produced must be the candidate's own words. Assessors should assure themselves of the authenticity of candidate's evidence.

Written and/or oral recorded evidence is required which demonstrates that the candidate has achieved the requirements of all of the Outcomes and Performance Criteria to show that the candidate has appropriate knowledge and understanding of the content of this Unit.

Written and/or recorded oral evidence is required which demonstrates that the candidate has achieved Outcome 1 and Outcome 2 to the standard specified in the Outcomes and Performance Criteria. The evidence for these Outcomes should be obtained under controlled, supervised conditions. The assessment should be closed-book and last no more than 45 minutes.

The instrument of assessment will provide opportunities for each of the Outcomes to be fulfilled by means of sampling across the range of the content of Outcomes 1 and 2. Where re-assessment is required, it should contain a different sample from the range of mandatory content contained within this document. Achievement can be decided by use of a cut-off score. Each sample must include the following:

- ◆ A feature and a use for two different types of computer systems
- ◆ A feature and a use for each of the following:
 - two output devices
 - two storage devices
 - two input devices
- ◆ One possible cause of personal injury when using a computer system
- ◆ One solution to potential health and safety issues associated with using a computer
- ◆ One risk associated with data storage
- ◆ One solution to risks related to data storage

The evidence for Outcome 3 will take the form of performance evidence supplemented by an assessor checklist and product evidence. Candidates are required to:

- ◆ Turn on a computer system and access peripherals.
- ◆ Change basic settings.
- ◆ Use GUI features from within the desktop and windows (eg; tab; slider; scroll bar; minimise; maximise and close) including icons (eg command; application; document; device and directory); input controls (eg check box; radio button; edit field; combo-box); pop-up menus.
- ◆ Use file-management features to: create new directories/folders from the desktop and from a save dialogue window within an application; move and copy files between directories; delete files.
- ◆ Use the Help system from within an application or from the system to solve a problem.

National Unit Specification: statement of standards (cont)

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- ◆ Customise features that will allow the user to configure the screen for accessibility needs eg vision, hearing and mobility needs.
- ◆ Back up and restore data using removable media.

Candidates must also provide two pieces of evidence generated from the tasks above:

- ◆ A screen shot of a task.
- ◆ A completed pro-forma detailing steps involved in carrying out one of the tasks.

For assessment purposes candidates are only required to carry out each of the tasks once. These tasks must be carried out under supervised conditions.

The Assessment Support Pack (ASP) for this Unit provides sample assessment materials including assessor checklists, practical tasks and an instrument of assessment for the knowledge and understanding of Outcomes 1 and 2. Centres wishing to develop their own assessments should refer to the Assessment Support Pack to ensure a comparable standard.

MANDATORY CONTENT

This content is subject to sampling during the Unit.

Outcomes 1 and 2

Computer systems:

- ◆ Handheld (such as Personal Digital Assistant (PDA) or palm top)
- ◆ Laptop
- ◆ Desktop
- ◆ Server
- ◆ Mainframe

Features:

- ◆ Physical Size (portability)
- ◆ Number of Users
- ◆ Connectivity
- ◆ Difference between a mainframe and a server

National Unit Specification: statement of standards (cont)

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Peripherals:

- ◆ Input devices:
 - keyboard and mouse
 - touchpad
 - presentation remote control
 - games controller
 - digital still camera
 - digital video camera
 - webcam
 - scanner
 - microphone
 - MIDI keyboard

- ◆ Output devices:
 - TFT monitor
 - CRT monitor
 - data projector
 - laser printer
 - inkjet printer
 - loudspeakers

- ◆ Storage devices:
 - magnetic drives (at time of print current technologies are hard disk drive, floppy disk drive and tape drive)
 - optical drives (CD and DVD reader/writers)
 - solid-state memory drives ('pen' drives; 'card' reader/writers)
 - in addition, the candidate must be able to recognise and match the different types of media and storage devices

- ◆ Health and safety hazards:
 - inadequate heating
 - lighting
 - ventilation
 - workstation ergonomics

- ◆ Risks to data:
 - malicious software (including viruses and spyware)
 - corruption of data

- ◆ Solutions to risks to data:
 - precautions
 - passwords

National Unit Specification: support notes

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This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit may be delivered as a stand-alone Unit or in combination with other Units as part of a group of Units making up an award, eg PC Passport: Beginner.

This Unit maps to the National Occupational Standards (NOS) for IT users as specified by the Sector Skills Council (e-Skills UK). This Unit includes full content coverage of level 1 Areas of Competence in the following areas of NOS

- ◆ Use IT Systems

Full assessment coverage of NOS is detailed in the Assessment Support Pack for this Unit. Further information regarding NOS can be found at www.e-skills.com.

Outcome 1

The aim of Outcome 1 is to familiarise the candidate with the range of computer types, components and appropriate uses that candidates are likely to meet at home or at work. It is not necessary to go into technical details about each computer type or component at this level — obvious characteristics of different types of computers and components such as size, appropriate use, capacity, etc is sufficient. Candidates should know the difference between read-only, read/write media, recordable and re-recordable media. However, it is not necessary to go into the finer detail of differences between DVD-R and +R etc.

With regard to their uses, there will inevitably be a great deal of crossover so it would be wise to base the use on the type of job required as the basis for typical uses. For example, diary for a PDA; kitchen design on a laptop; web authoring on a desktop; games design by a programming team on a server and sales and stock control in a shopping chain for a mainframe.

Outcome 2

The aim of this Outcome is to raise the awareness of potential health and safety hazards when using a computer at home or at work. At this level, these hazards should be limited to heating, lighting, ventilation and workstation ergonomics.

Candidates should be aware that data held within a computer is vulnerable and precautions must be taken to prevent the loss of valuable information. Candidates should be aware that malicious software such as viruses and spyware exist and computers need to be protected against them. Protection of data will include the use of passwords.

National Unit Specification: support notes (cont)

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Outcome 3

The aim of Outcome 3 is to familiarise the candidate with the basic use of a modern computer running an operating system that uses a GUI. It is anticipated that this Outcome will be largely based on practical work and that the candidate will be introduced to the features provided by the operating system while carrying out the operations in the course of one extended or several small tasks. It is important that candidates be shown how to use the system Help and also how to access Help from within an application. Troubleshooting problems is outwith the scope of this Unit. When problems do arise candidates should be encouraged to ask for help and try to resolve problems based on the help given. This might be resolving simple problems when faced with unfamiliar tasks or dealing with warning messages generated by an application or the system eg ‘Unable to open a document with an unfamiliar file format’ or ‘storage media has insufficient capacity left to save file’.

The level required for back-up and restoring could be introduced, where appropriate, by use of simple practical exercises of making a back-up of an ‘important’ file, deleting the original and then successfully restoring the file from the back-up copy.

Candidates should be aware that the Graphical User Interfaces (GUI) may be customised to suit individual needs.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

The Outcomes of this Unit do require the candidate to understand a number of technical terms and to be able to use these terms in their correct context. Where possible they should be introduced in a context with which the candidate is familiar. Candidates should have the opportunity to use a range of peripherals. The practical tasks should, as far as possible, be realistic and should relate to situations with which candidates are familiar.

The actual distribution of time between Outcomes is at the discretion of the centre. However, the following distribution and order is suggested:

Outcome 1	12 hours
Outcome 2	16 hours
Outcome 3	12 hours

The allocated timings allow for assessment and re-assessment where required.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit candidates are required to use basic features of a Graphical User Interface which may provide an opportunity to gather evidence towards aspects of IT Core Skill.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It may be appropriate for some of the evidence for this Unit to be produced using e-assessment provided the national standard is applied and the conditions of assessment are consistent for all candidates. This may take the form of e-testing (for knowledge and understanding) and/or e-portfolios (for practical abilities).

National Unit Specification: support notes (cont)

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If a centre is presenting Outcome 1 and Outcome 2 of these assessments online the following assessment methods, where appropriate, may be selected:

- ◆ Multiple choice
- ◆ Drag and drop
- ◆ Multiple response
- ◆ Mix and match
- ◆ a combination of the above

It is expected that the questions will be of the multiple-choice variety. Centres may consider the use of alternative questions types, particularly if using Computer Assisted Assessment approaches. However, care should be taken that the questions are valid and at an appropriate level. The use of simple true/false question responses is unlikely to achieve this.

For Outcomes 1 and 2 a suitable assessment would be an objective test which demonstrates that the candidate has the required knowledge. The evidence for these Outcomes should be obtained under controlled, supervised conditions. The assessment should be closed-book. Achievement could be decided using a cut-off score.

Where re-assessment of knowledge and understanding is required the questions presented to the candidate must be different on each assessment occasion.

There is an opportunity to use an online assessment environment for knowledge and understanding of Outcomes 1 and 2.

The practical skills may be demonstrated in the context of a single extended task, or in the context of a number of smaller tasks. The candidate will normally demonstrate the skills during the teaching and learning activities of the Unit, rather than as separate formal assessment activities.

If this Unit is undertaken in the workplace there may be opportunities for candidates to gather evidence in day-to-day workplace activities.

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

National Unit Specification: support notes (cont)

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DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

History of changes:

Version	Description of change	Date
02	Evidence Requirements clarified and/or details of NOS mapping inserted	10/08/2010