



National Unit Specification: general information

UNIT PC Passport: IT Software — Spreadsheet and Database
(SCQF level 5)

CODE F1FB 11

SUMMARY

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

This Unit is designed to introduce routine features of spreadsheet and database software. The candidate will gain practical experience in the use of routine features in these types of software. The Unit will also provide candidates with information regarding the selection of appropriate software for specific tasks.

It is appropriate for any candidate who wishes to enhance their IT skills by covering the routine features of spreadsheet and database application software.

OUTCOMES

- 1 Identify routine computer application software functions.
- 2 Identify information requirements to meet the needs of different audiences.
- 3 Use routine computer application software functions.
- 4 Produce solutions to specified tasks using functions of software application packages.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

- ◆ PC Passport: Introduction to IT Software and Presenting Information (SCQF level 4)

Administrative Information

Superclass: CD

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National Unit Specification: general information (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database
(SCQF level 5)

CREDIT VALUE

**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 Skills:

- ◆ Information Technology (SCQF level 5)
- ◆ Problem Solving (SCQF level 5)
- ◆ Communication (SCQF level 5)

These opportunities are highlighted in the Support Notes of this Unit Specification.

National Unit Specification: statement of standards

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

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 the Scottish Qualifications Authority.

OUTCOME 1

Identify routine computer application software functions.

Performance Criteria

- (a) Identify routine functions of a spreadsheet application package.
- (b) Identify routine functions of a database application package.

OUTCOME 2

Identify information requirements to meet the needs of different audiences.

Performance Criteria

- (a) Identify types of information required by different audiences.
- (b) Identify the different information formats produced by spreadsheets and database and how they address the needs of the audience.

OUTCOME 3

Use routine computer application software functions.

Performance Criteria

- (a) Use routine functions of a spreadsheet application package.
- (b) Use routine functions of a database application package.

OUTCOME 4

Produce solutions to specified tasks using features of software application packages.

Performance Criteria

- (a) Select an application package for each specified task.
- (b) Use the routine features of appropriate software packages.
- (c) Explain why this application package is the most suitable for the specified task.
- (d) Select appropriate information from a variety of sources.
- (e) Review the use of IT resources to produce a solution for the specified task.

National Unit Specification: statement of standards (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database
(SCQF level 5)

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, product and performance evidence is required which demonstrates that the candidate has achieved the requirements of all of the Outcomes and Performance Criteria.

Written and/or oral recorded evidence is required which demonstrates that the candidate has achieved Outcomes 1 and 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:

- ◆ Six routine features and functions of a spreadsheet application package.
- ◆ Six routine features and functions of a database application package.
- ◆ Three different types of formatted information produced by spreadsheets and database application packages addressing the needs of different audiences

Performance evidence supplemented by an assessor observation checklist is required which demonstrates that the candidate has achieved all mandatory requirements for Outcome 3 specified in this document to the standard specified in the Outcome and Performance Criteria. This evidence will be gathered under supervised, open-book conditions.

Candidates are required to:

- ◆ Demonstrate that they can use the range of functions for all software application packages detailed in this document.
- ◆ Complete two specified tasks using appropriate software application packages, which the candidate has selected, to create a solution. The specified tasks must be designed for different software application packages included in this Unit and must include those activities listed below.

National Unit Specification: statement of standards (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

Product evidence and written and/or oral recorded is required which demonstrates that the candidate has achieved Outcome 4 to the standard specified in the Outcome and Performance Criteria. This evidence will be gathered under supervised, open-book conditions.

Provide written and/or oral recorded evidence:

- ◆ Justifying an appropriate software package for each specified task. The justification must include how the needs of the specified tasks have been addressed
- ◆ Reviewing their own strengths and weaknesses in using IT to complete the tasks taking into account feedback from others.

Two specified tasks which are designed for separate software application packages are required for Outcome 4 from:

- ◆ Spreadsheet
- ◆ Database

For Outcome 1 candidates are expected to identify a sample of six functions from the range below:

- ◆ Absolute and relative cell references
- ◆ Functions — general, logical, financial and statistical
- ◆ Charts — any type except bar or column. Data must be used from non-adjacent cell ranges.
- ◆ Printing — print gridlines, row and column headings, selected area of a spreadsheet
- ◆ Formatting features:
 - cells (colour, shading and borders)
 - pages (headers and footers)
 - charts (change chart type, move and resize chart)
- ◆ Copying and pasting cells (within spreadsheets) including paste special
- ◆ Editing features — find and replace, insert and delete rows and columns
- ◆ Filtering using autofilter
- ◆ Inserting graphics
- ◆ Page breaks — inserting and changing position of page breaks
- ◆ Protection — password protection for file, cell protection, locked cells

For Outcome 2 candidates are required to identify output formats of spreadsheet charts and databases — records, reports and the result of a search for specified information.

The types of information required by different audiences to include a sample from the list below:

- ◆ Managers — budgets/forecasts; graphs showing performance; other management information
- ◆ Customers — details of products; price lists; stock availability
- ◆ Shareholders — share information
- ◆ Human resources — information about employees could be records in a database

National Unit Specification: statement of standards (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

The different information formats produced by spreadsheets and databases includes:

- ◆ Charts
- ◆ Records
- ◆ The result of a search for specific information
- ◆ Reports

For Outcome 3 candidates are required to demonstrate that they can use all functions listed in the spreadsheet and database sections below. The spreadsheet task for Outcome 4 must allow candidates to use **one function from each** of the following categories:

Spreadsheet functions

- ◆ Absolute and relative cell references
- ◆ Functions — general, logical, financial and statistical
- ◆ Charts — any type except bar or column. Data must be used from non-adjacent cell ranges.
- ◆ Printing — print gridlines, row and column headings, selected area of a spreadsheet
- ◆ Formatting features:
 - cells (colour, shading and borders)
 - pages (headers and footers)
 - charts (change chart type, move and resize chart)
- ◆ Copying and pasting cells (within spreadsheets) including paste special
- ◆ Editing features — find and replace, insert and delete rows and columns
- ◆ Filtering using autofilter
- ◆ Inserting graphics
- ◆ Page breaks — inserting and changing position of page breaks
- ◆ Protection — password protection for file, cell protection, locked cells

The database task for Outcome 4 must allow the candidate to use **one function from each** of the following categories:

Database functions

- ◆ Creating fields for entering data with the required field characteristics
- ◆ Modifying field characteristics while maintaining the integrity of existing data
- ◆ Data validation
- ◆ Adding, modifying and deleting records
- ◆ Multiple search criteria in queries/searches
- ◆ Complex search criteria — AND, OR, NOT, LIKE
- ◆ Sorting data
- ◆ Creating and formatting reports
- ◆ Printing — whole database and certain records

National Unit Specification: support notes

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

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.

National Unit Specification: support notes

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

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: Intermediate.

The overall aim of this Unit is to introduce the candidate to the routine features of spreadsheet and database application software. The candidate should be reminded that they must proofread their own work for accuracy. On completion of the Unit candidates should also be able to make an informed choice as to which software to use for a particular task. The Unit is designed to be task based and it is anticipated that most of the time will be spent on practical work.

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 2 Areas of Competence in the following areas of NOS:

- ◆ Make Selective Use of IT
- ◆ Spreadsheet Software
- ◆ Database Software

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

This Outcome deals mainly with the practical use of a range of software. Exercises may be presented for the Candidate to work through in order that they gain the practical skills necessary to demonstrate proficiency in the basic skills outlined below.

It is expected that candidates will be aware of the correct procedure to start and shut down a computer, how to log onto a system and the importance of logging off when they are finished using the system. Candidates should also be aware of the correct procedure for starting and terminating an application package. It is also expected that candidates will be familiar with the generic themes that are covered for all application packages.

- ◆ Spreadsheets:

This section should allow candidates to produce spreadsheets for a wide variety of uses. Candidates should be able to use routine formulae and functions (eg mathematical, statistical and financial) for tasks such as monthly expenditure and sales figures, and show this data using an appropriate type of graph. Candidates should be able to use a wide range of editing techniques appropriately in routine spreadsheets, eg absolute and relative cell references, add data and text to a chart, change the type of chart, etc.

National Unit Specification: support notes (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

◆ Database:

This section should allow candidates to enter and retrieve a range of information from a database and to create and modify database fields. Candidates should be aware of what types of information the database has been designed for and what types of design content are stored within the database, such as field types, field names and table names.

Candidates should become aware of:

- ◆ How data is structured in a simple (ie single-table, non-relational) database
- ◆ What characteristics database fields may have, eg data type, field name, field size and field format
- ◆ How these characteristics can contribute to data validation
- ◆ Why it is important to maintain data integrity
- ◆ What methods should be used to maintain data integrity in a simple database

Candidates are required to develop an understanding of the information produced by both software application packages and how the information can be used to meet the needs of different audiences.

Outcome 2

This Outcome relates to the use and production of information using software application packages. Candidates will be introduced to the information requirements of a range of different audiences. The different information formats available in a spreadsheet and a database application package, and how these meet the needs of different audiences will also be covered.

Outcome 3

This Outcome introduces candidates to the use of two different types of software application packages. Candidates are required to carry out a range of appropriate tasks using each package introduced in Outcome 1.

Outcome 4

This Outcome deals with candidates' ability to produce a solution to a given task after they have decided which application package is most suitable for the task. This Outcome is designed to consolidate Outcomes 1, 2 and 3. In Outcomes 1 and 2, candidates have gained the knowledge to make an informed decision and in Outcome 4 they should apply the skills acquired in Outcomes 1 and 3 to produce a solution to the specified task.

This Outcome deals with candidates' ability to select an appropriate application package for a specified task. Candidates may be given a task and asked to say which of the two types of application software covered in Outcomes 1 and 3 is most suitable for the specified task. Two tasks must be given to candidates, one for each application package and aimed at two distinct audiences with different requirements. This will involve different levels of complexity between the tasks.

National Unit Specification: support notes (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

Candidates should be able to determine how to use IT effectively for more complex tasks and purposes, taking account of their own skills and capabilities. This will involve working out how to use IT for more complex tasks (eg working out a monthly budget or producing an invoice).

Candidates should be able to identify an appropriate application package for a specific task and explain why and how using the IT system and software was an appropriate way of carrying out the task.

Having completed the tasks in Outcome 4 candidates should then review their selection of IT software and their own use of IT. Candidates should be given feedback from the assessor regarding their use of IT and should comment on this feedback in their review. Candidates should explain which software tools and techniques were chosen and how effectively they were used for the particular tasks.

Candidates should be able to discuss the merits of both software packages and come to an informed decision about the suitability of each package for the specified task.

In their review, candidates should know how to use a wide range of correct terms for hardware and software.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

This Unit has been designed to provide practical experience in the use of routine functions of spreadsheet and database application software. It is anticipated that the vast majority of the time spent on this Unit will be on practical exercises.

The Unit is designed to be task-based and it is anticipated that most of the time will be spent on practical work, although some discussion work may be required.

Outcome 4 requires the candidate to make an informed decision as to what software packages to use for specific tasks. It is expected that the features of each application, and what each package can and cannot do, will be covered during the practical exercises of Outcome 1.

It is, therefore, expected that the teaching plan for the Unit will commence with Outcomes 1 and 3 where the candidate is introduced to each application package and the uses of each package. The candidate will then continue on to Outcome 2 where the merits of different information formatting will be discussed in relation to the needs of the audience. Finally, to Outcome 4 where the candidate is required to select an application package for a specific task and to justify that selection and is required to produce a solution to the specified task.

While teaching will necessarily focus on a specific product, candidates should be made aware that alternative products are available and should be encouraged to explore these alternatives.

The actual distribution of time between Outcomes is at the discretion of the centre, however one possible distribution of time is:

Outcome 1 and 3	28 hours
Outcome 2	2 hours
Outcome 4	10 hours

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

National Unit Specification: support notes (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database
(SCQF level 5)

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

This Unit involves candidates:

- ◆ Using a wide range of IT and carrying out searches to extract and present relevant information which may provide an opportunity to gather evidence towards aspects of the IT Core Skill.
- ◆ Making selective use of IT and evaluating their choice which may provide an opportunity to gather evidence towards aspects of the Problem Solving Core Skill.
- ◆ Reporting a number of aspects of the assessment which may provide an opportunity to gather evidence towards aspects of the Communication 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).

If a centre is presenting Outcomes 1 and 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 will be closed-book. Achievement can be decided by the use of a cut-off score. The possibility may arise where these questions are taken as an online assessment.

The Evidence Requirements for Outcome 3 may be generated by on-going learning activities rather than a single assessment event.

The written evidence for Outcome 4 may take the form of a pro-forma where the candidate is required to answer specific questions, or be a report by the candidate justifying his/her selection.

It may be beneficial if each task supplied in Outcome 4 has a common theme, for example based around a local theatre group or golf club.

National Unit Specification: support notes (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database (SCQF level 5)

A portfolio of work is necessary to provide evidence of Outcome 4. This may be in the form of hardcopies of the candidate's solution to the tasks specified in Outcome 4 or can form part of an e-portfolio.

The tasks may involve preparing and presenting the same information for different audiences. This may be a detailed formatted report for golf club committee members and a sub-set of the information, such as graphs showing the number of members that have achieved different handicaps over the past year for other club members.

There may be an opportunity to use information that has been searched for and selected in other Units that the candidate may have been undertaking such as an internet Unit that requires candidates finding and evaluating information.

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)*.

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).

National Unit Specification: support notes (cont)

UNIT PC Passport: IT Software — Spreadsheet and Database
(SCQF level 5)

History of changes:

Version	Description of change	Date
02	Evidence Requirements clarified and/or details of NOS mapping inserted	10/08/2010
03	Evidence Requirements clarified	15/04/2011