

## National Unit Specification: general information

**UNIT** Spreadsheets (Intermediate 2)

**NUMBER** DC9R 11

**COURSE** PC Passport

### SUMMARY

This unit is designed to enable candidates to develop routine spreadsheet skills to a level expected in the workplace. The aim of this unit is to prove that the candidate is able to use a number of tools to create a spreadsheet model and analyse data in a contemporary business situation, and to demonstrate file and folder management.

### OUTCOMES

- 1 Use a computer system to perform routine tasks related to spreadsheets.
- 2 Construct a spreadsheet for a specific purpose.
- 3 Perform routine analysis on spreadsheet data.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre. No previous knowledge or experience of spreadsheet software is required. However, it would be desirable if candidates possessed some previous knowledge or experience of computers before undertaking this unit.

### CREDIT VALUE

1 credit at Intermediate 2 (6 SCOTCAT points at SCQF level 5\*)

*\*SCOTCAT 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*

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### Administrative Information

**Superclass:** CD

**Publication date:** August 2003

**Source:** Scottish Qualifications Authority

**Version:** 01

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*SCOTCAT points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

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## **National Unit Specification: general information (cont)**

### **CORE SKILLS**

This unit contributes to IT Core Skills Intermediate 2 level.

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, publication code BA0906).

## National Unit Specification: statement of standards

### UNIT            Spreadsheets (Intermediate 2)

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

Use a computer system to perform routine tasks related to spreadsheets.

##### Performance criteria

- a)        The use of computer hardware is efficient and effective.
- b)        The use of the operating system is efficient and effective.
- c)        Use of help facilities is efficient and effective.
- d)        Common file formats are accurately described.
- e)        Terminology relating to hardware, software and spreadsheets is understood and used correctly.

##### Note on range for the outcome

Tasks: Navigating folders; create and delete folders; saving, renaming, moving and copying files; printing files (including cell range); cut, copy and paste cells (within and between spreadsheets); load and terminate spreadsheet program.

##### Evidence requirements

Performance evidence that the candidate can use a computer system to the standards defined by performance criteria (a) to (c). This will be in the form of an observation checklist or other means of recording candidate performance (such as a video recording).

Evidence of knowledge and understanding will consist of 8 objective questions relating to performance criteria (d) and (e) and underpinning knowledge relating to performance criteria (a) to (c). Candidates are required to produce at least 5 correct answers.

#### OUTCOME 2

Construct a spreadsheet for a specific purpose.

##### Performance criteria

- a)        The spreadsheet is created efficiently and effectively using the features of the software.
- b)        Data entry is accurate and efficient using automation facilities.
- c)        The spreadsheet accurately models its defined purpose.
- d)        The presentation of the spreadsheet is clear and consistent with its purpose.
- e)        The spreadsheet is numerically correct.
- f)        Functions are correctly described.

## National Unit Specification: statement of standards (cont)

### UNIT            Spreadsheets (Intermediate 2)

#### **Note on range for the outcome**

Purpose: personal; commercial.

Features of software: editing features (including undo and search-and-replace); formatting features (including conditional formatting); functions; formulae.

Functions: general; statistical; logical; financial.

#### **Evidence requirements**

Performance evidence that the candidate can create a spreadsheet to the standards defined by performance criteria (a) to (e). Candidates must create a minimum of three spreadsheets spanning the defined range of purposes. The defined range of functions should be included in the models, although full coverage of the range can be distributed between the models; absolute and relative cell referencing should be used in at least one of the models.

Evidence of knowledge and understanding will consist of 8 objective questions relating to performance criterion (f) and the underpinning knowledge relevant to performance criteria (a) to (e). Candidates are required to produce at least 6 correct answers.

### **OUTCOME 3**

Perform routine analysis on spreadsheet data.

#### **Performance criteria**

- a) Analysis is accurate and results are numerically correct.
- b) Data is appropriately and accurately represented in graphical format.
- c) The selection of chart type is appropriate to the data set.
- d) Data analysis tools are correctly described.

#### **Note on range for the outcome**

Data: routine; familiar; unfamiliar.

Analysis: filtering; goal seeking; charting.

#### **Evidence requirements**

Performance evidence that the candidate can perform data analysis to the standards defined by performance criteria (a) to (c). Candidates must analyse a minimum of three sets of data, supplied by the assessor; the data sets should be substantial.

Evidence of knowledge and understanding will consist of 9 objective questions relating performance criterion (d) and the underpinning knowledge relevant to performance criteria (a) to (c). Candidates are required to produce at least 6 correct answers.

## **National Unit Specification: statement of standards (cont)**

**UNIT**            Spreadsheets (Intermediate 2)

### **EVIDENCE REQUIREMENTS FOR THE UNIT**

The assessment of knowledge and understanding can be combined into a single instrument of assessment consisting of 25 objective questions relating to outcomes 1, 2 and 3. The distribution of questions should adhere to the evidence requirements for each outcome:

Outcome 1	8 questions
Outcome 2	8 questions
Outcome 3	9 questions.

The combined pass mark for this assessment is 17 correct answers (out of 25 questions). If a single instrument of assessment is used, it is not necessary to satisfy the pass mark for each outcome. Candidates will be deemed to have achieved all outcomes (with respect to their knowledge and understanding) if their combined score is at least 17 out of 25. However, for the purposes of re-assessment, the individual thresholds for each outcome will be followed.

## National Unit Specification: support notes

### UNIT            Spreadsheets (Intermediate 2)

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 the PC Passport award at Intermediate 2 level.

This unit is one of a series of units entitled *Spreadsheets*. Similar units exist at Intermediate 1 and Higher levels.

#### ***Corresponding the Outcome 1-3***

The term “spreadsheets” is used to indicate the use of full-featured applications which display financial and statistical information in the form of charts and tables and permit complex analysis of data. Where performance criteria refer to effective use this should be ascertained over time and not in one-off set-piece situations.

#### ***Outcome 1***

This outcome relates to the routine tasks candidates must be able to perform in order to make use of a spreadsheet application. Routine tasks are those required from a competent spreadsheet operator in the workplace. The required tasks are defined in the range. The performance criteria define the standards which should be applied to candidate activity.

Performance criterion (a) requires the candidate to use hardware efficiently and effectively. The range of hardware used by candidates will vary from centre to centre, but typical hardware would include: keyboard, pointing device (such as a mouse), screen and system unit. Effective use of hardware means that, for example, candidates will be able to use the hardware without assistance. They are also expected to complete the prescribed range of activities efficiently, in other words, within an acceptable period of time) and without too many attempts. The tasks set for candidates should be non-complex but typical of those tasks expected of employees in a working situation (such as efficiently organising their files using hierarchical folders).

Performance criterion (b) requires candidates to use an operating system efficiently and effectively. The use of the OS should be limited to that required to carry out the tasks defined in the range. At this level, there is a requirement that candidates not only accomplish the task (which relates to effectiveness) but that they also complete the task efficiently – without assistance and within a short period of time. So, for example, it is not acceptable for them to require repeated attempts at copying a file.

Performance criterion (c) relates to the help facility of a Spreadsheet application. Candidates should be able to find help and use it effectively to navigate to information in the help database.

## National Unit Specification: support notes (cont)

### UNIT Spreadsheets (Intermediate 2)

Performance criterion (d) requires the student to be aware of the common file formats. For example if using Excel s/he should be aware that the standard extension for the full workbook file is \*.xls, and if saved as a template \*.xlt, others include: text for PC (\*.txt) or Mac; CSV (comma separated values (PC \*.CSV or Mac) and SYLK (Symbolic Link). Many of the above files can also be imported eg CSV as can single tables from databases. Graphics files like \*.GIF can be inserted.

Performance criterion (e) relates to the terminology of spreadsheets. At this level, candidates are expected to possess a fairly extensive technical vocabulary relating to computer hardware, computer software and routine aspects of full-featured spreadsheets.

#### *Outcome 2*

This outcome relates to creating a spreadsheet document. The type of information that candidates are expected to deal with should be familiar (but non-trivial), and relate to personal or business situations. The performance criteria define the standards which should be applied to candidate activity.

Performance criterion (a) requires candidates to type in text and numeric data for a routine spreadsheet using the standard features of the software without undue delay and using any input device available that suits them. Usually this would be a standard keyboard but it could use handwriting recognition, speech recognition or a specially adapted keyboard. Important points to bear in mind would be to know at this stage what sort of portfolio it is destined for and save and/or print accordingly to local machine and/or network and/or removable medium.

Performance criteria (b and e) require that data is entered accurately and also efficiently. Where necessary judicious use of numeric keypad, Enter key, range selection, replication and series could be used. In any case input must not be unduly slow.

Performance criterion (c and d) require candidates to follow the instructions for the exercise in such a way that the final resulting spreadsheet matches the instructions sufficiently to be described as fit-for-purpose. For instance a small set of accounts should be readable and accurate.

Performance criterion (f) requires that functions are described correctly. This should not be difficult with the help facilities of a modern spreadsheet but that description must also translate into sufficient understanding to enter the correct data and syntax into the function to ensure the correct result. The ability to estimate can prove invaluable here.

#### *Outcome 3*

This outcome relates to manipulating and representing the Spreadsheet data.

Performance criterion (a) requires candidates to analyse data and produce accurate results

Performance criterion (b) relates to previewing to avoid output being clipped or spread across sheets in a way that would spoil the document. This then involves being able to call up, use and if needs be close preview mode and where necessary alter page setup.

Performance criteria (b-d) require the student to understand the routine data supplied, represent it sensibly in rows and columns, make use of appropriate functions to automatically provide such things

as totals and finally to present the data in a compelling way with the aid of standard types of chart eg pie charts and histograms. Understanding of the concept of a data set or series is vital here.

## National Unit Specification: support notes (cont)

### UNIT            Spreadsheets (Intermediate 2)

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

A practical, hands-on approach to learning should be adopted. The emphasis should be on learning-by-doing. Terminology and underpinning knowledge should be introduced in a practical context.

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

Outcome 1	12 hours
Outcome 2	17 hours
Outcome 3	11 hours

Throughout this unit, candidate activities should relate to their personal or recognisable business interests. For example candidates should be offered exercises involving timetables, accounts and other general and statistical data that can genuinely hope to stimulate their interest.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

It is recommended that centres combine the assessment of knowledge and understanding into a single objective question paper. Re-assessment should be undertaken by re-assessing the specific outcomes which have not been passed.

Evidence of practical competence should be stored in a portfolio. At the completion of this unit the portfolio should contain a range of evidence, drawn from the evidence requirements for each outcome. This will include an observation checklist for all the outcomes.

This material may be stored in paper or electronic format. Centres may choose to store candidate evidence in an electronic portfolio (e-portfolio).

#### **SPECIAL NEEDS**

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (SQA, publication code AA0645).