

# SVQ for IT Users (ITQ) — level 3 (SCQF level 6)

## F9D2 04: Spreadsheet Software 3

### 6 SCQF credit points at SCQF level 6

**Description:** This is the ability to use a software application designed to record data in rows and columns, perform calculations with numerical data and present information using charts and graphs.

Outcome	Skills and Techniques	Knowledge and Understanding
<b>On completion of this Unit the candidate should be able to:</b>		
1 Use a spreadsheet to enter, edit and organise numerical and other data.	<ol style="list-style-type: none"><li><b>Enter and edit</b> numerical and other data accurately.</li><li><b>Combine and link data</b> from different sources.</li><li><b>Store and retrieve</b> spreadsheet files effectively, in line with local guidelines and conventions where available.</li></ol>	1 Identify what <b>numerical and other information</b> is needed in the spreadsheet and how it should be <b>structured</b> .
2 Select and use appropriate formulas and data analysis tools and techniques to meet requirements.	<ol style="list-style-type: none"><li>Select and use a wide range of appropriate <b>functions and formulas</b> to meet calculation requirements.</li><li>Select and use a range of tools and techniques to analyse and interpret data to meet requirements.</li><li>Select and use <b>forecasting</b> tools and techniques.</li></ol>	2 Explain what methods can be used to summarise, <b>analyse and interpret</b> spreadsheet data and when to use them.
3 Use tools and techniques to present, and format and publish spreadsheet information.	<ol style="list-style-type: none"><li>Select and use appropriate tools and techniques to <b>format spreadsheet cells, rows, columns</b> and worksheets effectively.</li><li>Select and use appropriate tools and techniques to generate, develop and <b>format charts and graphs</b>.</li><li>Select and use appropriate <b>page layout</b> to present, print and publish spreadsheet information.</li></ol>	<ol style="list-style-type: none"><li>Explain how to present and format spreadsheet information effectively to meet needs.</li><li>Explain how to find and sort out any errors in formulas.</li></ol>

Outcome	Skills and Techniques	Knowledge and Understanding
On completion of this Unit the candidate should be able to:	<p>4 <b>Check spreadsheet information</b> meets needs, using IT tools and making corrections as necessary.</p> <p>5 Use auditing tools to identify and respond appropriately to any <b>problems with spreadsheets.</b></p>	

Note: The **emboldened** items are exemplified in the Support Notes.

## Evidence Requirements

Completion of a portfolio (manual, electronic or combination) to cover all of the Skills and Techniques and Knowledge and Understanding points stated above. The evidence generated should adhere to the Assessment Strategy for this award and encompass a range of evidence types.

**NB: It is possible to achieve this Unit by Accreditation of Prior Achievement (APA), however, the relevant evidence must be referenced within the portfolio.**

## General information

This Unit equates to NOS (National Occupational Standards for IT Users 2009) code SS: Spreadsheet software level 3. It has a stated number of SCQF credit points = 6 at SCQF level 6.

## Support Notes

### Summary

A SCQF level 6 (ITQ level 3) user can select and use a wide range of advanced spreadsheet software tools and techniques to produce present and check complex and non-routine spreadsheets.

Spreadsheet software tools and techniques will be defined as 'advanced' because:

- ◆ the range of data entry, manipulation and outputting techniques will be complex and non-routine
- ◆ the tools, formulas and functions needed to analyse and interpret the required information require complex and non-routine knowledge and understanding (for example, data restrictions, data validation using formula, pivot tables, data maps)
- ◆ the user will take full responsibility for setting up and developing the functionality of the spreadsheet

**Examples of context:** Typical examples may include — cost benefit analysis, analysis of results from a questionnaire or survey, developing summary reports from a large data set, creating a personalised customer quotation from a standard price list.

**Examples of content** are given separately for highlighted text, where explanatory notes are required on terminology in the Outcomes, and do not form part of the standards. Such examples are not meant to form a prescriptive list for the purposes of assessment but rather to amplify and interpret the generic terms used in the performance criteria in the light of current usage of ICT systems and software. These examples are subject to change as new tools and techniques become commonplace and older ones drift out of use.

**The examples given below are indicative of the learning content and are not intended to form a prescriptive list for the purpose of assessment.**

### Outcome 1

**Numerical and other data:** Numbers, charts, graphs, text, images, *linked and embedded objects, references, lists.*

**Spreadsheet structure:** Spreadsheet components (eg cells, rows, columns, tabs, pages, charts, ranges, workbooks, worksheets), structure, design and layout; *spreadsheet templates.*

**Enter and edit:** Insert data into single and multiple cells, clear cells, edit cell contents, replicate data, find and replace, add and delete rows and columns, use absolute and relative cell references, add data and text to a chart, *hide and protect cells, create, modify and merge multiple copies of a shared workbook; data validation; shortcuts; data entry forms, lists.*

**Combine and link data:** Across worksheets and files; consolidate data; shared or collaborative workspaces.

**Store and retrieve:** Save, save as, find, open, close, open CSV file in spreadsheet application, save spreadsheet file as CSV; templates; *selective data import and export; file properties; password protection*

### Outcome 2

**Analysis and interpretation methods:** Totals, sub-totals and summary data, *automatic sub-totals, group and outline;* sorting and display order; lists, tables, graphs and charts; filter rows and columns; *forms, data restrictions, data validation, adding messages to data, using formulae to determine valid entries for cells; displaying by interest; pivot tables and charts;* judgement of when and how to use these methods.

**Functions and formulas:** Design of formulas to meet calculation requirements — mathematical, statistical, financial, logical, *look-up, arguments, arrays and formulas for validating data.*

**Forecasting tools:** What-if scenarios, goal seek; data tables; views.

### Outcome 3

**Format cells:** Numbers, currency, percentages, number of decimal places, font and alignment, borders and shading; date and time; *custom formats; conditional formatting; styles, cell protection; workbook protection.*

**Format rows and columns:** Height, width, borders and shading, hide, freeze.

**Format charts and graphs:** Chart type (including *custom types, 2 graphs types on 1 axis*); title, axis titles, legend, change chart type, move and resize chart, *axis scale, annotation, layout, pivot table reports.*

**Page layout:** Size, portrait, landscape, margins, header and footer, page breaks, page numbering, date and time, adjust page set up for printing; *selective printing or publishing of spreadsheet information*.

**Check spreadsheet information:** Accuracy of numbers, formulas and any text; suitability of charts and graphs; reveal formulae; layout and formatting, validity, relevance and accuracy of analysis, interpretation of calculations and results; clarity of overall spreadsheet; *check links*.

**Problems with spreadsheets:** Using help; sorting out errors in formulas, *calculations and results; data validation, locate invalid data*.

## **Guidance on examples of evidence**

### **Typical examples of evidence for Outcomes 1–3**

Typical examples may include cost benefit analysis, analysis of results from a questionnaire or survey, developing summary reports from a large data set, creating a personalised customer quotation from a standard price list.

To assess competence in the Knowledge and Understanding sections for all of the Outcomes a knowledge test in the form of multiple-choice questions (say 16–20 questions) or candidate statement or expert witness testimonial statements or a semi structured interview could be employed. Either one or a combination of these methods would be appropriate. If oral questioning techniques are employed it is essential to keep a record of the questions asked, together with a record in a suitable format of the candidate's responses to these for evidence purposes.

### **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 whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements)