Unit Title:	**Spreadsheet software**
OCR unit number:	66
Level:	3
Credit value:	6
Guided learning hours:	45
Unit reference number:	J/502/4626

Learning Outcomes	Assessment Criteria	Examples
The learner will: 1. Use a spreadsheet to enter, edit and organise numerical and other data	The learner can: 1.1 Identify what numerical and other information is needed in the spreadsheet and how it should be structured 1.2 Enter and edit numerical and other data accurately 1.3 Combine and link data from different sources 1.4 Store and retrieve spreadsheet files effectively, in line with local guidelines and conventions where available	Numerical and other information: 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 multiple cells at once, replicate data, find and replace, 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* 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*

2. Select and use appropriate formulas and data analysis tools and techniques to meet requirements	2.1 Explain what methods can be used to summarise, analyse and interpret spreadsheet data and when to use them 2.2 Select and use a wide range of appropriate functions and formulas to meet calculation requirements 2.3 Select and use a range of tools and techniques to analyse and interpret data to meet requirements 2.4 Select and use forecasting tools and techniques	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;;* Judgment 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
3. Use tools and techniques to present, and format and publish spreadsheet information	3.1 Explain how to present and format spreadsheet information effectively to meet needs 3.2 Select and use appropriate tools and techniques to format spreadsheet cells, rows. columns and worksheets effectively 3.3 Select and use appropriate tools and techniques to generate, develop and format charts and graphs 3.4 Select and use appropriate page layout to present, print and publish spreadsheet information 3.5 Explain how to find and sort out any errors in formulas 3.6 Check spreadsheet information meets needs, using IT tools and making corrections as necessary	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 Charts and graphs: Pie chart, bar chart, single line graph, area, column, x-y scatter, stock, radar, doughnut, surface, *custom types, 2 graphs types on 1 axis* Format charts and graphs: Title, axis titles, legend, change chart type, move and resize chart, *axis scale, annotation, layout, pivot table reports*

	3.7 Use auditing tools to identify and respond appropriately to any problems with spreadsheets	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 and accuracy of analysis, clarity of overall spreadsheet; *check links* Problems with spreadsheets: Using help; sorting out errors in formulas, *calculations and results; data validation, locate invalid data*

Unit purpose and aim

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. This unit is about the skills and knowledge required by an IT user to 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 described 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); and
- the user will take full responsibility for setting up and developing the functionality of the spreadsheet.

Details of relationship between the unit and national occupational standards

This unit maps fully to competences outlined in IT User National Occupational Standards version 3 (2009).

Assessment

All ITQ units may be assessed using any method, or combination of methods, which clearly demonstrates that the learning outcomes and assessment criteria have been met. Assessments must also take into account the additional information provided in the unit Purpose and Aims relating to the level of demand of:

- the activity, task, problem or question and the context in which it is set;
- the information input and output type and structure involved; and
- the IT tools, techniques or functions to be used.

See Recommended Assessment Methods in the ITQ Centre Handbook.

Evidence requirements

An evidence checklist must be completed without gaps.

Guidance on assessment and evidence requirements

Please refer to the centre handbook for ITQ 2009.