

<b>College</b>	
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<b>Unit Name(s) &amp; Code(s)</b>	IT in Business: Spreadsheets F84V34
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## Learners

### *Description & Common Characteristics etc.*

- School leavers
- Adult returners
- Modern apprentices
- Employed on Day Release course

## The Context

### *Target Outcomes, Knowledge and/or Skills, Performance Criteria, Evidence Requirements*

#### **Outcome 1 CREATE A SPREADSHEET DESIGN TO PROVIDE SOLUTIONS FOR A BUSINESS SCENARIO**

##### Outcome 1 Knowledge and/or Skills

- Spreadsheet design
- Functions
- Formulas

- Cell references
- Cell formats
- Comments
- Macro
- Security features for data protection

### **Outcome 1 Evidence Requirements**

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- create a spreadsheet using three interconnected worksheets to solve a business problem
- create four simple formulas and two complex formulas to include one occurrence of each of the following: add, subtract, multiply, divide
- in formulas and/or functions apply one occurrence of the following forms of cell referencing: relative, absolute, named cell, named range, 3-D
- apply two functions: =SUM and =IF
- apply appropriate cell formatting to assist the analysis/reading of the worksheets using one occurrence of the following: number, font enhancement, conditional formatting
- apply two spreadsheet features to control the worksheet view
- record and run one macro to assist with repetitive tasks
- protect data using two different built in security features

### **Outcome 2 PRESENT SPREADSHEET DATA IN GRAPHICAL FORM AND INTERPRET THE RESULTS**

#### **Outcome 2 Knowledge and/or Skills**

- Graphical representation of a single data series
- Graphical representation of multiple data series
- Chart enhancements
- Analyse data

#### **Outcome 2 Evidence Requirements**

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- create an appropriate chart to represent a single data series
- create an appropriate chart to represent a multiple data series
- apply two chart enhancements (the two enhancements can be in the same chart)
- analyse each chart providing a description of the chart, an explanation of the relevance of the evidence and draw conclusions supported by the information to resolve a business problem

### **Outcome 3 PROVIDE SOLUTIONS TO A BUSINESS SCENARIO USING SPREADSHEET STATISTICAL FUNCTIONS**

### Outcome 3 Knowledge and/or Skills

- Measures of central tendency
- Summarised data
- Frequency distribution
- Standard deviation

### Outcome 3 Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by using built-in statistical functions within a spreadsheet application to provide solutions to a business scenario showing that they can:

- perform calculations using three methods of averaging — mean, median, mode within the same data set
- summarise data using three functions to calculate: Largest number in a range; Smallest number in a range; Number of entries in a range
- prepare a frequency distribution table and represent the results graphically
- calculate one standard deviation
- analyse all data results providing a description, an explanation of the relevance of the evidence and draw conclusions supported by the information to resolve a business problem

### ***Existing approaches to assessment for the Unit are:***

Assessment is divided into 2 parts, the first covers Outcomes 1 and 2 the second covers Outcome 3

First Assessment, students are presented with a case study;

- Raw data is presented
- 23 numbered tasks are presented with several subsections
- Students design and create a spreadsheet and present a hard copy or electronic copy
- Students must also evidence activity by presenting several screenshots

Second assessment, students are presented with a spreadsheet;

- This is interrogated for the presentation of statistical evidence

### ***Staff experience/expertise in technology-enhanced assessment***

- Staff delivering this unit will be comfortable using technology, however, not necessarily experienced in using all the aspects of VLE, portfolio etc. technology. This would primarily be as a result of time restrictions in learning how to use the technologies and the limited expertise within the college to support such activity.

## **The Solution**

### ***Descriptions***

- Provide an assessment, which can be replicated in most colleges using a VLE. Tutor instruction will be built into the assessment pack so that a tutor (or learning

technologist) can set up the assessment with ease. For the majority of the assessment the students will be given practical tasks to complete, marking of the practical work will be done in Moodle using rubrics

- Practical work in the spreadsheets will also produce and automatic mark using a hidden sheet of the spreadsheet
- Multiple Choice Questions, using tools within the VLE preferably, will assess the design knowledge.

***Assessment Type:***

- Summative

***Rationale***

- The current and previous assessment support packs require students to design and create the spreadsheet from scratch. Mistakes which are made in the design and mistakes in formulae are carried through the entire assessment. This makes the marking of the assessment particularly difficult. The specification states that the knowledge of design needs to be assessed but does not stipulate that the student needs to actually carry the design through to implementation; this therefore could be assessed by MCQs. This would then allow for templates to be developed for the students to demonstrate their skills in enhancing and using a spreadsheet. If the assessment was carried out in stages, a number of templates could be used to ensure students do not carry mistakes through. Each stage could be marked and an appropriate pass mark set. If students make mistakes in certain aspects they get the opportunity to see the correct formulae etc. at the next template stage

***Technology & Delivery Setting***

- VLE using MCQ, computer labs

***Resources and Tools Required***

- VLE platform, MCQs technology

***What the Tutor Does (and ICT skills required)***

- Sets up the assessment on the VLE. As above knowledge of VLE facilities

***What the Students Do (and ICT skills required)***

- Access assessment on VLE. Need basic skills is the use of VLE

***Outcomes***

***Implementation and effectiveness***

- The rubrics element was fine but the MCQ element and provision of the completed templates ran into Verification problems with the SQA.
- The automatic marking in the spreadsheets well

***Student feedback***

- Not available at the time of writing

## **Reflections & Changes**

- A lot of work has gone into this and if the verification issues are solved this would be a very big leap forwards. The discussion with the SQA was ongoing at the time of writing.