Design and use spreadsheets (Excel 2019)

This workbook supports BSBITU212 Create and use spreadsheets and BSBITU314 Design and produce spreadsheets in the Business Services Training Package

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BSBITU212 Create and use spreadsheets

Application

This unit describes the skills and knowledge required to correctly create and use spreadsheets and charts using both cloud-based and non-cloud based spreadsheet applications.

It applies to individuals who perform a range of routine tasks in the workplace using a limited range of practical skills and fundamental knowledge of spreadsheet software/applications in a defined context under direct supervision or with limited individual responsibility.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Elements and Performance Criteria

Element Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Page reference
1. Prepare to produce spreadsheet	1.1 Adjust workspace, furniture and equipment to suit own ergonomic, work organisation and work realth and safety (WHS) requirements	13–16
	1.2 Identify task purpose, audience and presentation requirements, and clarify with relevant personnel as required	22–24, 74, 137– 143
	1.3 Identify specific task requirements, including layout and delivery timeline, and clarify with relevant personnel as required	21–26, 74, 137– 143
	1.4 Select most appropriate application to produce spreadsheet in acron ance with available resources and organicational policies	28
2. Create simple spreadsheets	2.1 Engure data is entered, checked and amended in a cordar ce with organisational and task requirements, a main ain consistency of design and layout	46–55, 74–75, 77, 79–87, 92–98
	2.2 Tormat spreadsheet using application functions; to adjust page and cell layout to meet information requirements, in accordance with organisational style and presentation requirements	50–71, 73, 79–88
	2.3 Ensure formulae are used and tested to confirm output meets task requirements, in consultation with appropriate personnel as required	36, 41–44, 54–54, 57–58, 88–98
	2.4 Use relevant help functions to overcome simple issues relating to spreadsheet design and production	99, 143

Element Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Page reference
3. Produce simple charts	3.1 Select chart type and design that enables valid representation of numerical data and meets organisational and task requirements	100–102
	3.2 Create chart using appropriate data range in spreadsheet	103–108, 111
	3.3 Modify chart type and layout using formatting features	104–109
4. Finalise and present spreadsheets	4.1 Review and edit final spreadsheet and prepare for delivery in accordance with organisational and task requirements	70, 77–78, 92–98, 110, 130–131, 133, 134–136, 140–141, 143
	4.2 Deliver document to relevant audience within designated timelines and in accordance with organisational requirements	20–21, 72–74, 11, 125–126, 130–131, 133, 134–136, 140– 141, 143
	4.3 Name and store spreadsheet appropriate, in accordance with organisational requirements and exit application without data loss	Throughout workbook

Foundation Skills

This section describes those language, literacy manneracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description	Page reference
Reading	Recognises in medical and textual information within a range of less urces to determine and complete work according or equirements	Throughout workbook
Writing	Erners ar d amends routine data into relevant digital applications using a format appropriate to requirements	Throughout workbook
Oral communication	Listens to short and specific instructions and uses questions to clarify understanding	23
	Uses simple mathematical language to confirm and convey requirements	74–75, 143
Numeracy	Uses basic mathematical skills to create and apply spreadsheet formulae	Throughout workbook
Navigate the world of work	Recognises and follows explicit and implicit protocols and meets expectations associated with own role	14, 24–25
Interact with others	Recognises purpose of various communications directly relevant to own role and clarifies as required	23–23, 74–75, 142
Get the work done	Uses key digital application features and functions in performing specific work tasks	Throughout workbook

Assessment for BSBITU212

This Unit is assessed by:

- recommending spreadsheet applications
- demonstrating correct WHS practices
- demonstrating Excel use
- using a manual or help facility
- creating spreadsheets.

Assessment Requirements

Performance Evidence

Evidence of the ability to:	Page reference
follow correct ergonomic requirements and organisational policies and procedures	13–14
produce spreadsheet documents that align to document purpose and appropriate to target audience	Throughout workbook
consult with appropriate personnel as required	25 74, 142
adhere to organisational style and presentation requirements	≥ 4 , ⁹ 1, 137–143
use relevant help functions to rectify simple cocu nent issues	99, 143
produce spreadsheet document in appropriate format for review, including ability to create and modify simple charts	Throughout workbook
adhere to designated timelines and ensure high accuracy when preparing desuments	Throughout workbook
demonstrate ability to revent data loss and damage.	30, 35, 124–125

Knowledge Evidenc

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role.	Page reference
Key elements of basic formatting styles appropriate to workplace documents	Throughout workbook
Key functions of spreadsheet applications, both cloud-based and non-cloud based	Throughout workbook
Key features of organisational requirements for ergonomic standards	13–14
Key features of organisational guidelines on spreadsheet manipulation and processing	Throughout workbook

BSBITU314 Design and produce spreadsheets

Application

This unit describes the skills and knowledge required to develop spreadsheets through the use of both cloud-based and non-cloud based spreadsheet applications.

It applies to individuals employed in a range of environments who tend to be personally responsible for designing and working with spreadsheets under minimal supervision. These individuals are generally required to have intermediate knowledge and understanding of a number of spreadsheet applications.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Elements and Performance Criteria

Element Elements describe the essential	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Page reference
outcomes. 1. Select and prepare	1.1 Identify spreadsheet task purpose and audienc	22–24, 74–75, 187–188, 194
resources	1.2 Identify task requirements in relation to data on (r) storage, output, timeline and presentation form at	21–26, 74–75, 125–126, 137– 141, 178–179, 187–188, 194
	1.3 Select most appropriate at olitation to produce spreadsheet, in accordance vit. available resources and organisational policies	28
2. Plan spreadsheet	2.1 Ensure spreadshort a sign suits purpose, audience and information requirements of task	Throughout workbook
design	2.2 Ensure spread, heet design enhances readability and appearance, and meets organisational and task requirements for style and layout	22–25, 74–75, 137–141, 178– 179, 187–188, 194
	2.3 Use avai able application functions to ensure consistency of design and layout, adhering to organisational and task requirements	Throughout workbook
3. Create spreadsheet	3.1 Enter data, check and amend to maintain consistency of design and layout, in accordance with organisational and task requirements	Throughout workbook
	3.2 Format spreadsheet using application functions to adjust page and cell layout to meet information requirements, in accordance with organisational style and presentation requirements	Throughout workbook
	3.3 Ensure formulae are tested and used to confirm output meets task requirements, in consultation with appropriate personnel as required	Throughout workbook
	3.4 Use relevant help functions to overcome intermediate-level issues with spreadsheet design and production	99, 143

Element Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.	Page reference
4. Produce intermediate-level charts	4.1 Select chart type and design that that offers analysis of numerical data, and meets organisational and task requirements	100–102, 191–193
	4.2 Create charts using appropriate data range in the spreadsheet	103–108, 111, 183, 191–193
	4.3 Modify chart type and layout using formatting features, adhering to organisational and task requirements	104–109, 183
5 Finalise and present spreadsheets	5.1 Review and edit final spreadsheet and any accompanying charts, and prepare for delivery in accordance with task requirements	Throughout workbook
	5.2 Deliver document to relevant audience within designated timelines and in accordance with organisational requirements for speed and accuracy	Throughout workbook
	5.3 Name and store spreadsheet appropriately in accordance with organisational requirements and exit application without data loss/damage	Throughout workbook

Foundation Skills

This section describes those language, littre by, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description	Page reference
Reading	Recognises the interprets numerical and textual information to determine organisational and task requires ents	Throughout workbook
Writing	Inputs it americal and key reporting information when areating and finalising spreadsheets and use's format, layout, style guides and standard maming conventions to organise data according to purpose and audience	Throughout workbook
Oral communication	Participates in exchange of information to determine whether formulae utilised produce result required	186, 194
Numeracy	Uses mathematical equations to create simple formulae and validate numerical data	Throughout workbook
Navigate the world of work	Recognises and follows explicit and implicit protocols and meets expectations associated with own role	Throughout workbook
Interact with others	Collaborates with others to achieve joint outcomes	74–75, 186
Get the work done	Uses advanced features within applications to address routine and complex work tasks	Throughout workbook

Assessment for BSBITU314

This Unit is assessed by:

- recommending spreadsheet applications
- demonstrating correct WHS practices
- demonstrating Excel use
- using help facilities
- creating spreadsheets.

Assessment Requirements

Performance Evidence

Evidence of the ability to:	Page reference
follow correct ergonomic, conservation requirements and relevant organisational and statutory requirements	13–16
produce spreadsheet documents that align to document purpose and appropriate to target audience	Th oughout workbook
design spreadsheets that address a range of data and organisational requirements	Throughout workbook
use software functions, graphics and support materials to create spreadsheets that adhere to organisational requirements relating to style and presentation	Throughout workbook
use relevant help functions to rectify intermediate-level document issues	99, 143
produce spreadsheet document is appropriate format for review, including ability to create and readify intermediate-level charts that analyse the dataset	Throughout workbook
adhere to designate a limeline; and requirements for high accuracy	Throughout workbook

Knowledge Evidence	
The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role.	Page reference
 Key elements of intermediate-level formatting styles appropriate to workplace documents 	Throughout workbook
Key functions of spreadsheet applications, both cloud-based and non-cloud based	Throughout workbook
Key features of organisational guidelines on spreadsheet design and use	24, 75, 137–142, 187–188, 191– 194
 Key features of organisational requirements for ergonomic standards, work periods and breaks, and conservation techniques. 	13–16

File naming procedures

A file naming convention is a system for naming digital files in a logical manner. A good file naming convention is both **consistent** (using the same convention for all files) and **descriptive** (using the name to indicate the content).

Consistent file naming helps with sorting and searching for files.

Descriptive file naming allows anyone viewing the content of a folder to identify the type of data in the file without opening it. This is particularly useful if you are sharing files in a business environment.

Your workplace may already have a naming convention; this should be given to you by your supervisor or may be documented in a procedures manual.

Naming convention tips

- The name should be easy to read; avoid abbreviations that others may not understand.
- File names are usually listed alphabetically; make the first word is meaningful.
- Consider including a creation date. Even though the device assigns a date to the file, this
 will change if the file is edited later. Be consistent with date formats, by DD-MMYY or
 DD-MM-YYYY.
- Check consistency with the use of spaces and punctuation in items.
- File names cannot contain the following characters / : '
- Depending on organisational requirements, you may ne d to include the following in the file name:
 - organisation name
 - department name
 - document type (business case, project plan)
 - author name
 - recipient name (in the case of correspondence)
 - record number a un que identifier applied to all documents in an organisation.

Suggested naming conventions

A letter written by Tim Smyrie re Excel training could be saved using these formats:

Receiver name first	SmytheTim letter re Excel training 30072019
Document type first	Letter - Smythe re Excel training, 30_07_19
Date first	2019_07_30 Letter to Smythe, Tim re Excel training
Record number	09638320cpj_Smythe_T_300719

File naming procedure for this workbook

All exercise files used or created for this workbook are to be named using the following the file name convention:

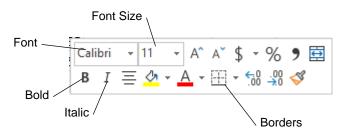
Exercise # creation date FamilyName

Example

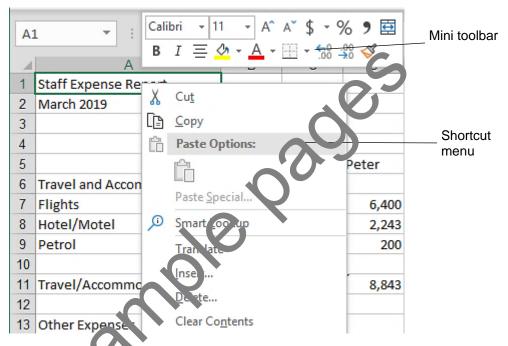
Exercise 23 050619 Hosana

Mini toolbar

A floating mini toolbar provides access to some of the tools commonly used to format a worksheet. It is activated using the right mouse button.



To display the mini toolbar select the cell(s) to be formatted and click the right mouse button. The mini toolbar and the shortcut menu will display.



Button	Descript on	Example
Font	Style of type.	Gill Sans Ultra Bold Berlin Sans FB
Font Size	The size of the type. The higher the number, the larger the type size.	10 pt, 12 pt, 14 pt, 16 pt
Bold	Applies a thicker and darker attribute to data.	Excel 2019
Italic	Formats data on an angle.	Excel 2019
Borders	Select from a range of borders and styles from the of the Borders button.	Australia America

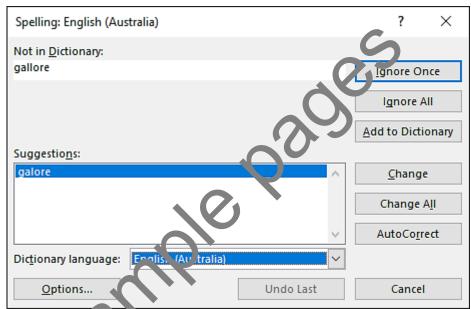
Spelling

The Spelling feature checks for words which are not in the Excel dictionary and gives you suggested words. Words can also be added to the dictionary. The Spelling tool is found in the Proofing Group on the Review Ribbon.



F7 To start checking spelling click on the Spelling button. Excel checks from where the cursor is positioned in your worksheet. The Spelling feature will only check the current worksheet or selected worksheets.

When the Spelling dialog box appears, the incorrect word is shown in the *Not in Dictionary:* box.



The Suggestions: box lists other suggested words. You can either click on a word in the Suggestions: box or true in the correct word in the Not in Dictionary: box.

To replace the incorrer, word with the text in the *Not in Dictionary:* box, click on the Change button.

Note

Sometimes Excel indicates correct Australian spelling as errors and offers US spelling even when the dictionary is set to English (Australia), e.g. customise → customize, licence → license. If you are not sure which spelling is correct, refer to the Macquarie dictionary.

Important

It is best practice to proofread your work as the Spelling feature will not pick up the incorrect use of a word. Excel matches words against its dictionary and only displays a word that is spelt incorrectly.

Exercise 68

Using Exercise 66... click on column header B to select the entire column.

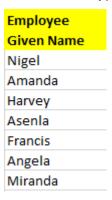


2. Click on the arrow at the bottom of the Insert button and select

Insert Sheet Columns

A new column has been inserted as column B with the original data that was in this column moved to the right.

- 3. In cell B3 type: Employee
- 4. Press Alt Enter and type: Given Name
- 5. Press Enter. Type the names listed below into column B.



6. Leave the workbook open for the next exercise.

Updating formulas

If rows/columns are inserted outside the existing formula range in *Totals* rows/columns, the Totals formulas may not be update and to natically. It is important to check the formulas.

Exercise 69

1. Using Exercise 66... insert a row above row 4.

The formatting from the row above will be automatically applied to the new row and will have to be changed.

- 2. With the row selected click on the Bold button to turn off bold formatting in this row.
- 3. Click on the Fill Color drop-down arrow and select No Fill to remove the yellow.
- 4. Type the following into the new row:

	Employee	Employee	Hours	
3	Family Name	Given Name	Worked	Pay Rate
4	Briars	Marcel	38	21

- 5. Format cell D4 to Currency.
- 6. Insert the appropriate formula in cell E4. (You can use the fill handle and drag up from cell E5.)
- 7. Double click on cell E12 and look at the data range it has not been updated. Redo the formula to reflect the correct cell references.
- 8. Leave the workbook open for the next exercise.

Deleting rows

When a row is deleted, the contents of that row are removed and all remaining rows move upwards.

If more than one row is selected, all the rows selected will be deleted.

Exercise 70

1. Using Exercise 66... click on row header 9.



2. Click on the arrow at the bottom of the Delete button and select



3. Leave the workbook open for the next exercise.

Deleting columns

Delete Sheet Rows

Deleting a column will remove the contents and move all remaining columns to the left.

If more than one column is selected, all the columns selected will be deleted

Exercise 71

1. Using Exercise 66... click on column header A to select the column



2. Click on the arrow at the bottom of the Delete buttor

Delete Sheet Columns

and select

- Ctrl Z 3. Click on the Undo button to restore the deleted column.
 - 4. Leave the workbook open for the next cercise.

Deleting data

Data can be deleted from ows and columns by selecting the row/column and pressing the Delete key. Only the data in that row/column will be deleted, not the row/column itself.

Exercise 72

- 1. Using **Exercise 66...** click on row header 6 to select the row.
- 2. Press the Delete key. Only the data in the selected row is deleted.
- to restore the deleted data. Ctrl Z 3. Click on Undo
 - 4. Save and close the workbook.

Copying and moving data

Data can be moved and copied as follows:

- The **Clipboard** is a general area of Windows where data can be stored then pasted to another location of the workbook or another Windows application.
- The **Drag and Drop** feature is a quick way to copy or cut data to adjoining cells.

Copying data using drag and drop

Exercise 73

- 1. Open the file Sunshine Flowers from the 978-1-921971-40-2 BSBITU212 BSBITU314 exercise files folder.
- 2. Select cells A3 to E9. Position the mouse pointer at the bottom edge of the selected range as shown below. The mouse pointer will display as .

/_	Α	В	С	D	Е
1	SUNSHINE FLOWERS				
2					
3		Jan	Feb	Mar	Apr
4	Otago	2176	3540	1795	2179
5	Windsor	1300	1500	1500	231.3
6	Bluff	1821	2714	1821	74.0
7	Glen Eden	1795	3850	1879	25′,5
8					
9	Total	7092	11604	6995	· 9167
10					1/2

3. Hold down the Ctrl key and click and drag the selected range down so the top of the range is highlighted in row 11 as displayed below.

4	Α	В		D	Е
1	SUNSHINE FLO	WERS			
2					
3		Jan	Feb	Mar	Apr
4	Otago	2176	3540	1795	2179
5	Windsor 👞	1300	1500	1500	2303
6	Bluff	1821	2714	1821	2100
7	Glen Eden	1795	3850	1879	2585
8					
9	Total	7092	11604	6995	9167
10					
11					
12					
13					
14					
15					
16					
17					

If you do not hold down the Ctrl key while dragging, the data will be moved instead of being copied.

Encrypting with a password

Workbooks often contain commercially sensitive information, e.g. staff pay rates, price lists, discounts received by certain clients. Passwords can be used to prevent others from opening a file. If you protect a file with a password, you must provide the password each time you open the file, typing uppercase and lowercase letters **exactly** as you did when you specified the password.

Exercise 111

- 1. Open the file **Balance sheet** from the *978-1-921971-40-2 BSBITU212 BSBITU314* exercise files folder.
- 2. Save As the file in your working folder following workbook procedures.
- 3. Click on File and check Info is selected on the left.



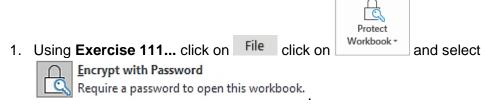
5. Enter a password. Record your password somewhere you will remember otherwise you will be locked out of your workbook if you forget it.



- 6. Click on OK.
- 7. Retype the password to verify it then and o OK.
- 8. Click on to return to the worksheet.
- 9. Save and close the workbook.
- 10. Open the workbook Enter the password and click on OK.
- 11. Leave the workboo's per for the next exercise.

Removing encryption

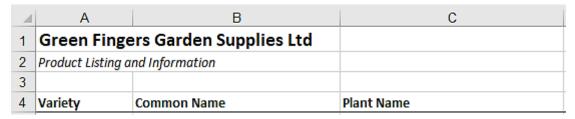
Exercise 112



- 2. Delete the dots from the Password: box.
- 3. Click on OK.
- 4. Save and close the file.

Exercise 118

- 1. Open the file **Plant catalogue** from the *978-1-921971-40-2 BSBITU212 BSBITU314* exercise files folder.
- 2. Save As the file in your working folder following workbook procedures.
- 3. Format the titles, subtitles and column headers to appear as shown below.



- 4. Format the cells in the Colour and Description columns to wrap text.
- 5. Format the Price column to currency with two decimal places.
- 6. Indent the content of the Colour column.
- 7. View the worksheet in Print Preview.

You should see that the worksheet spans across two pages. You will need to alter the page orientation to landscape to fit onto one page.

- 8. Click on Page Setup to display the Page Setup dialog box.
- 9. With the Page tab displayed select the Landscape option



10. Click on the Margins tab. From the Center on page section put a tick in both the Horizontally and Vertically check to centre the worksheet.



- 11. Click on OK.
- 12. If all columns are not shown close Print Preview.
- 13. Adjust column widths as required until all columns are displayed. Use Print Preview to confirm the worksheet will print on one page.
- 14. Save the workbook.
- 15. Save the worksheet as a PDF.
- 16. Check the layout of the PDF, make any necessary adjustments to your Excel file and recreate the PDF.
- 17. Close both files.

Exercise 119

- 1. Create a new spreadsheet as shown below.
- 2. Add a multiplication formula to calculate the Total Cost of Goods on Hand column.
- 3. Select cells B18 to E18 and click on the AutoSum button to calculate the Total for each column. Apply currency formatting if required.
- 4. Headings consisting of two lines can be typed in by using Alt Enter to break the line.
- 5. Format the spreadsheet as shown below:
 - a. Text in cell A1 (and in cell A2) is merged and centred across to column E.
 - b. Office Equipment Supplies is Calibri 24 pt, bold, white colour. Apply black shading to the cell.
 - c. Format the subtitle as 11 pt, italic.
 - d. Use yellow shading in the column headers row.
- 6. Check spelling in the spreadsheet.
- 7. Horizontally centre the spreadsheet using the Page Setup dialog box.
- 8. Save the spreadsheet in your working folder following workboth procedures.
- 9. Save the spreadsheet as a PDF.
- 10. Check the layout of the PDF, make any necessary at ustraents to your Excel file and recreate the PDF.
- 11. Close both files.

4	Α	В		D	E	
1		Office Eq	nament :	Supplies		
2	Stock take for January 2019					
3	ch the for Junuary 2015					
4						
_	n		0.1.0.1	Cost of Goods	Total Cost of	
5	Product	S ock on Hand	Stock on Order	(per item)	Goods on Hand	
6						
7	Calculators	20	5	\$27.95	\$559.00	
8	Diaries	13	10	\$13.95	\$181.35	
9	A4 trays	25	10	\$7.95	\$198.75	
10	Blue pen - 5 pack	100	50	\$4.30	\$430.00	
11	Red pen - 5 pack	150	0	\$4.30	\$645.00	
12	Highlighter - 3 pack	22	18	\$5.50	\$121.00	
13	A4 writing pads	95	55	\$1.50	\$142.50	
14	Clear folders	69	41	\$1.50	\$103.50	
15	A3 desk pads	8	12	\$7.50	\$60.00	
16	Message pads	59	36	\$1.95	\$115.05	
17						
18	TOTAL	561	237	\$76.40	\$2,556.15	