

## BSBITU402 Develop And Use Complex Spreadsheets



Microsoft Excel 2016

Product Code: INF1752

ISBN: 978-1-925526-80-6

General Description This course has been mapped to the *BSBITU402 - Develop And Use Complex Spreadsheets* competency. It applies to individuals who require skills to create complex spreadsheets to store and retrieve data. They may work as individuals providing administrative support within an enterprise, or may be independently responsible for designing and working with spreadsheets relevant to their own work roles.

Learning Outcomes At the completion of this course you should be able to:

- create more complex formulas and functions
- use logical functions to test whether a statement is true or false
- use maths functions to solve complex problems
- use a variety of statistical functions
- use a variety of financial functions to perform calculations
- use the date and time functions to perform calculations
- use a range of lookup and reference functions
- use a range of techniques to work with worksheets
- use data linking to create more efficient workbooks
- understand and create simple PivotTables
- construct and operate *PivotTables* using some of the more advanced techniques
- create and edit a PivotChart
- use a range of elements and features to enhance charts
- select and change the format of objects in a chart
- apply a variety of page setup techniques
- import data into Excel and export data from Excel
- create and use templates in Microsoft Excel
- create recorded macros in **Excel**
- use the macro recorder to create a variety of macros
- work safely with your computer, consider your impact on the environment and manage files and folders efficiently
- obtain help for *Excel* whenever you need it

Prerequisites

BSBITU402 Develop And Use Complex Spreadsheets assumes some knowledge of Microsoft Excel 2016, as well as fundamental skills in computer operations.

Topic Sheets

278 topics

Methodology

The InFocus series of publications have been written with one topic per page. Topic sheets either contain relevant reference information, or detailed step-by-step instructions designed on a real-world case study scenario. Publications can be used for instructor-led training, self-paced learning, or a combination of the two.

Formats Available A4 Black and White, A5 Black and White (quantity order only), A5 Full Colour (quantity order only), Electronic Licence



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Companion **Products** 

There are a number of complementary titles in the same series as this publication. Information about other relevant publications can be found on our website at www.watsoniapublishing.com.

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#### **Contents**

#### **Complex Formulas**

Scoping a Formula
Long-Hand Formulas
Preparing for Complex Formulas
Creating the Base Formula
Adding More Operations
Editing a Complex Formula
Adding More Complexity
Copying Nested Functions

Switching to Manual Recalculation Pasting Values From Formulas

Documenting Formulas Challenge Exercise

Challenge Exercise Sample

#### **Logical Functions**

Understanding Logical Functions Using IF With Text

Using IF With Numbers Nesting IF Functions

Using IFERROR

Using TRUE and FALSE

Using AND Using OR Using NOT Challenge Exercise

Challenge Exercise Sample

#### **Maths Functions**

**Understanding Maths Functions** 

Using SQRT Using ABS Using INT Using TRUNC Using ROUND

Using ROUNDDOWN and ROUNDUP

Using ODD and EVEN
Using CEILINGMATH
Using MROUND
Using PRODUCT
Using SUMIF
Using SUMIFS
Using SUMPRODUCT
Challenge Exercise
Challenge Exercise Sample

#### **Statistical Functions**

Understanding Statistical Functions Status Bar Statistics Using COUNT and COUNTA

Using COUNTBLANK

Using COUNTIF

Using MODE Using MEDIAN

Using LARGE and SMALL

Using STDEV Using VAR

Challenge Exercise

Challenge Exercise Sample

#### **Financial Functions**

**Understanding Financial Functions** 

Using PMT
Using FV
Using NPV
Using PV
Using RATE
Using EFFECT
Using NOMINAL
Challenge Exercise

Challenge Exercise Sample

#### **Date and Time Functions**

Understanding Date and Time

Functions Using NOW

Using HOUR and MINUTE

Using TODAY

Calculating Future Dates

Using DATE

**Using Calendar Functions** 

Using WEEKDAY
Using WEEKNUM
Using WORKDAY
Using EOMONTH
Challenge Exercise
Challenge Exercise Sample

#### **Lookup Functions**

Understanding Data Lookup

Functions
Using CHOOSE
Using VLOOKUP

Using VLOOKUP for Exact Matches

Using HLOOKUP Using INDEX Using Match

**Understanding Reference Functions** 

Using ROW and ROWS

Using COLUMN and COLUMNS

Using ADDRESS
Using INDIRECT
Using OFFSET
Challenge Exercise
Challenge Exercise Sample

#### **Worksheet Techniques**

Inserting and Deleting Worksheets

Copying a Worksheet Renaming a Worksheet Moving a Worksheet Hiding a Worksheet Unhiding a Worksheet Copying a Sheet to Another

Workbook

**Changing Worksheet Tab Colours** 

Grouping Worksheets Hiding Rows and Columns Unhiding Rows and Columns Freezing Rows and Columns Splitting Windows

Challenge Exercise
Challenge Exercise Sample

#### **Data Linking**

Understanding Data Linking Linking Between Worksheets Linking Between Workbooks Updating Links Between Workbooks Challenge Exercise

Challenge Exercise

Challenge Exercise Sample

#### **PivotTables**

Understanding PivotTables
Recommended PivotTables
Creating Your Own PivotTable
Defining the PivotTable Structure
Filtering a PivotTable

Clearing a Report Filter
Switching PivotTable Fields
Formatting a PivotTable
Understanding Slicers
Creating Slicers
Inserting a Timeline Filter

Challenge Exercise
Challenge Exercise Sample



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#### **PivotTable Features**

**Using Compound Fields** Counting in a PivotTable Formatting PivotTable Values Working With PivotTable Grand

Working With PivotTable Subtotals Finding the Percentage of Total Finding the Difference From Grouping in PivotTable Reports **Creating Running Totals Creating Calculated Fields Providing Custom Names** Creating Calculated Items PivotTable Options Sorting in a PivotTable Challenge Exercise Challenge Exercise Sample

#### **PivotCharts**

Inserting a PivotChart

Defining the PivotChart Structure Changing the PivotChart Type Using the PivotChart Filter Field **Buttons** Moving PivotCharts to Chart Sheets Challenge Exercise Challenge Exercise Sample

#### **Chart Elements**

**Understanding Chart Elements** Adding a Chart Title **Adding Axes Titles** Repositioning the Legend **Showing Data Labels Showing Gridlines** Formatting the Chart Area Adding a Trendline **Adding Error Bars** Adding a Data Table Challenge Exercise Challenge Exercise Sample

#### **Chart Object Formatting**

**Understanding Chart Formatting Selecting Chart Objects Using Shape Styles Changing Column Colour Schemes** Changing the Colour of a Series **Changing Line Chart Colours Using Shape Effects** Colouring the Chart Background

Understanding the Format Pane Using the Format Pane **Exploding Pie Slices Changing Individual Bar Colours** Challenge Exercise Challenge Exercise Sample

#### **Page Setup**

Strategies for Printing Worksheets **Understanding Page Layout** Using Built in Margins **Setting Custom Margins** Changing Margins by Dragging Centring on a Page **Changing Orientation** Specifying the Paper Size Setting the Print Area Clearing the Print Area **Inserting Page Breaks** Using Page Break Preview **Removing Page Breaks** Setting a Background Clearing the Background Settings Rows as Repeating Print **Titles Clearing Print Titles Printing Gridlines Printing Headings** Scaling to a Percentage Fit to a Specific Number of Pages Challenge Exercise

#### Challenge Exercise Sample **Importing and Exporting**

**Understanding Data Importing** Importing From an Earlier Version **Understanding Text File Formats** Importing Tab Delimited Text Importing Comma Delimited Text Importing Space Delimited Text **Importing Access Data** Working With Connected Data **Unlinking Connections Exporting to Microsoft Word Exporting Data as Text** Challenge Exercise Challenge Exercise Sample

#### **Templates**

Creating a Template Using a Template Modifying a Template Challenge Exercise Challenge Exercise Sample

#### **Recorded Macros**

**Understanding Excel Macros** Setting Macro Security Saving a Document as Macro Enabled Recording a Simple Macro Running a Recorded Macro Relative Cell References Running a Macro With Relative References Viewing a Macro Editing a Macro Assigning a Macro to the Toolbar Running a Macro From the Toolbar Assigning a Macro to the Ribbon Assigning a Keyboard Shortcut to a Macro Deleting a Macro Copying a Macro Challenge Exercise Challenge Exercise Sample

#### **Recorder Workshop**

Preparing Data for an Application Recording a Summation Macro **Recording Consolidations Recording Divisional Macros Testing Macros** Creating Objects to Run Macros Assigning a Macro to an Object Challenge Exercise Challenge Exercise Sample

#### **General Computer Operation**

Risks and Hazards in the Office Setting Up an Ergonomic Workstation **Breaks and Exercises** Reducing Paper Wastage **Environmentally Friendly Computing Backup Procedures** Challenge Exercise Challenge Exercise Workspace

#### **Getting Help**

**Understanding How Help Works** Using Tell Me Accessing the Help Window Navigating the Help Window

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Using Google to Get Help Printing a Help Topic Other Sources of Assistance Challenge Exercise Challenge Exercise Workspace



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### **Unit Mapping**

This unit describes the skills and knowledge required to use spreadsheet software to complete business tasks and produce complex worksheets.

	Performance Criteria	Location
1	Prepare to develop spreadsheet	
1.1	Organise personal work environment in accordance with ergonomic requirements	Chapter 20: General Computer Operation
1.2	Analyse task and determine specifications for spreadsheets	Generally assumed throughout
1.3	Identify organisational and task requirements of data entry, storage, output, reporting and presentation requirements	Generally assumed throughout
1.4	Apply work organisation strategies and energy and resource conservation techniques to plan work activities	Chapter 20: General Computer Operation
2	Develop a linked spreadsheet solution	
2.1	Utilise spreadsheet design software functions and formulae to meet identified requirements	Chapter 1: Complex Formulas, Chapter 2: Logical Functions, Chapter 3: Maths Functions, Chapter 4: Statistical Functions, Chapter 5: Financial Functions, Chapter 6: Date and Time Functions, Chapter 7: Lookup Functions, Chapter 8: Worksheet Techniques
2.2	Link spreadsheets in accordance with software procedures	Chapter 8: Worksheet Techniques, Chapter 10: PivotTables, Chapter 12: PivotCharts
2.3	Format cells and use data attributes assigned with relative and/or absolute cell references, in accordance with the task specifications	Chapter 1: Complex Formulas
2.4	Test formulae to confirm output meets task requirements	Generally assumed throughout
3	Automate and standardise spreadsheet operation	
3.1	Evaluate tasks to identify those where automation would increase efficiency	Chapter 19: Recorder Workshop
3.2	Create, use and edit macros to fulfil the requirements of task and automate spreadsheet operation	Chapter 18: Recorded Macros, Chapter 19: Recorder Workshop
3.3	Develop, edit and use templates to ensure consistency of design and layout for forms and reports, in accordance with organisational requirements	Chapter 17: Templates
4	Use spreadsheets	
4.1	Enter, check and amend data in accordance with organisational and task requirements	Generally assumed throughout, Chapter 1: Complex Formulas, Chapter 2: Logical Functions, Chapter 3: Maths Functions, Chapter 4: Statistical Functions, Chapter 5: Financial Functions, Chapter 6: Date and Time Functions, Chapter 7: Lookup Functions
4.2	Import and export data between compatible spreadsheets and adjust host documents, in accordance with software and system procedures	Chapter 16: Importing and Exporting
4.3	Use manuals, user documentation and online help to overcome problems with spreadsheet design and production	Chapter 21: Getting Help
4.4	Preview, adjust and print spreadsheet in accordance with organisational and task requirements	Chapter 15: Page Setup
4.5	Name and store spreadsheet in accordance with organisational requirements and exit the application without data loss or damage	Generally assumed throughout
5	Represent numerical data in graphic form	
5.1	Determine style of graph to meet specified requirements and manipulate spreadsheet data if necessary to suit graph requirements	Chapter 13: Chart Elements, Chapter 14: Chart Object Formatting
5.2	Create graphs with labels and titles from numerical data contained in a spreadsheet file	Chapter 10: PivotTables, Chapter 13: Chart Elements, Chapter 14: Chart Object Formatting
5.3	Save, view and print graph within designated timelines	Chapter 10: PivotTables, Chapter 13: Chart Elements, Chapter 14: Chart Object Formatting



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