Spreadsheets: Working out your sums and calculations

iT Centre Learning

iT services

UNIVERSITY OF OXFORD

The small print

Prerequisites

Time in the workshop is precious – it is an opportunity for you to interact with the workshop leader and other participants through questions and discussions and to share your experiences and concerns. To make the most of this time we sometimes ask you to carry out learning activities ahead of the workshop so that everyone comes into the class with the same basic knowledge. We keep this prior learning to a minimum and often make use of online videos. Online videos provided through LinkedIn Learning can be accessed free of charge by University members anytime, anywhere, through a browser or app.

Your course booking will tell you if any prior learning activity is required. If you don't have an environment where you can do this learning, you can come along to one of our LinkedIn Learning sessions. These are a quiet space where you can work through videos or other workshop resources.

If you arrive for a workshop without having done the prior learning, the workshop leader may suggest that you come back on another session.

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About the workshop designer

Tanya Prescott first started IT teaching in 2009 and has taught in many different FE settings. Tanya has extensive experience teaching Excel courses, in particular, and is always enthusiastic to help others discover the potential of Excel spreadsheets and how they really can make life easier.

Revision history

Version	Date	Author	Comments
2.2	January 2024	Graham Addis	Changed presenter
2.1	December 2022	Graham Addis	Update to latest template
2.0	May 2020	Graham Addis	Convert to online format.
1.3	December 2019	Graham Addis	Change course name
1.2	October 2019	Graham Addis	Update workbook references
1.1	August 2019	Duncan Young	Small print updates
1.0	September 2017	Pamela Stanworth	

About this workshop

A hands-on activity session to grow your confidence in devising and checking formulae in a spreadsheet.

If Excel formulae terrify you, this is your course!

We will include pointers to other workshops and further resources that will help you go on later to analyse and organise your data.

What you will learn

We will discuss how to create simple formulae, to carry out calculations in a spreadsheet. You will understand how formulae work in a spreadsheet, and how to correct or edit them.

You will gain experience at thinking through situations to set up formulae. We will explore a range of calculations and devise formulae to suit each one. We will look at ways to organise numerical data to enable efficient analysis.

What you need to know

The ideas and techniques covered in this workshop will apply to a range of tools. We will demonstrate using *Excel for Windows*, which is widely available. However, the concepts will be the same, whatever spreadsheet software you decide to use.

I will assume that you are reasonably confident in using the tool you have chosen to use to create your spreadsheets. With your chosen tool, you will need to be able to:

- Open, close, and save files
- Browse folders and drives
- Enter and edit text and numbers
- Move around the *Windows* screen using mouse or keyboard
- Navigate the commands and menus, using Help as necessary

If you need to review these activities, LinkedIn Learning is a great place to get guidance. There is an activity with relevant Molly videos in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Spreadsheets: Working out your sums and calculations (Activity)”.

The resources you need

Sample documents that you can use to experiment with will be made available, but you may like to bring along your own.

The resources for most workshops, including any pre-course activity, are in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Spreadsheets: Working out your sums and calculations”

Unless you have been told otherwise, in classroom workshops there will be a computer available for you to use with *Excel for Windows* installed.

You can use your own computer with your preferred app installed if you want to – just bear in mind that I am not an expert in every app (although I am sure that between us we will be able to sort out most problems!).

Learning Objectives

This workshop has the following learning objectives:

Learning Objective One - Find and open a spreadsheet

Learning Objective Two - Devise formulae for a range of situations

Learning Objective Three - Devise formulae for a range of situations – including functions

Learning Objective One - Find and open a spreadsheet

Start *Excel* with a plain workbook.

Look around the screen: explore some of the features, including the various tabs of the Ribbon and the Help button (usually at top right).

Choose **File->Open** and browse to the location of your exercise files

Find **formula writing activities.xlsx** and open the workbook.

Learning Objective Two - Devise formulae for a range of situations

Notice that this workbook has several worksheets (tabs along the bottom edge).

In workbook **formula writing activities.xlsx** you are going to try completing the tasks in on the following worksheets: **Task1, Task2, Task3**.

On each worksheet, read the text and try out the task described. Each has a situation, for which you are going to devise *Excel* formulae to carry out the calculations required.

Sample solutions are provided in corresponding worksheets in another workbook: **formula writing activities sample solutions.xls**.

Remember to save your edited workbook frequently, as you go along (for example using **File->Save**).

Learning Objective Three - Devise formulae for a range of situations – including functions

Notice that this workbook has several worksheets (tabs along the bottom edge).

In workbook **formula writing activities.xlsx** you are going to try completing the remaining tasks.

On each worksheet, read the text and try out the task described. Each has a situation, for which you are going to devise *Excel* formulae to carry out the calculations required.

Sample solutions are provided in corresponding worksheets in another workbook: **formula writing activities sample solutions.xls**.

Remember to save your edited workbook frequently, as you go along (for example using **File->Save**).

Further information

Getting extra help

The IT Learning Centre offers bookable clinics where you can get pre- or post-course advice. Contact us using courses@it.ox.ac.uk.

Learning Objective Four - Study Videos from LinkedIn Learning

On our website, you will find our collection of self-service courses and resources. This includes providing LinkedIn Learning video-based courses free to all members of the University. Visit skills.it.ox.ac.uk/linkedin-learning and sign in with your Single Sign-On (SSO) credentials.

Some courses recommend pre- and/or post-course activities to support your learning. You can watch the online videos anywhere, anytime, and even download them onto a tablet or smartphone for off-line viewing.

About the IT Learning Portfolio online

Many of the resources used in the IT Learning Centre courses and workshops are made available as Open Educational Resources (OER) via our Portfolio website at skills.it.ox.ac.uk/it-learning-portfolio.

Find the pre-course activity for this course in the IT Learning Portfolio: visit skills.it.ox.ac.uk/it-learning-portfolio and search for “Spreadsheets: Working out your sums and calculations (Activity)”.

About the IT Learning Centre

The IT Learning Centre delivers over 100 IT-related teacher-led courses, which are provided in our teaching rooms and online, and we give you access to thousands of on-line self-service courses through Molly (powered by LinkedIn Learning).

Our team of teachers have backgrounds in academia, research, business and education and are supported by other experts from around the University and beyond.

Our courses are open to all members of the University at a small charge. Where resources allow, we can deliver closed courses to departments and colleges, which can be more cost-effective than signing up individually. We can also customize courses to suit your needs.

Our fully equipped suite of seven teaching and training rooms are usually available for hire for your own events and courses.

For more information, contact us at courses@it.ox.ac.uk

About IT Customer Services

The IT Learning Centre is part of the Customer Services Group. The group provides the main user support services for the department, assisting all staff and students within the University as well as retired staff and other users of University IT services. It supports all the services offered by IT Services plus general IT support queries from any user, working in collaboration with local IT support units.

The Customer Services Group also offers a data back-up service; an online shop; and a computer maintenance scheme. Customer Services is further responsible for desktop computing services – for staff and in public/shared areas – throughout UAS and the Bodleian Libraries.

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Resources for your learning

Activities for you to practice today

- In the coursebook
- Work at your own pace!
- Be selective

Videos with today's topics in LinkedIn Learning

Follow-up work

- Continue with exercises after the session
- Bookable Course Clinics later

Course topics

Setting up worksheets
Entering data and text

Creating a formula
Adding up a column
Understanding formulae

More resources

Hands-on activities

Setting up a worksheet

Adding some data

Entering text and numbers

Type in a cell or in the formula bar

Right- or left-aligned?

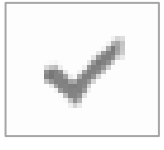
Creating a formula

Creating a formula in a cell

Formula begins with =

Type or click cell references

Use arithmetic symbols + - * / ^

Press [Enter] or click 

Working with formulae

Result appears in the cell

Formula shows in the formula bar

Cell contents or Result ?

[Esc] or to start again

Updating values

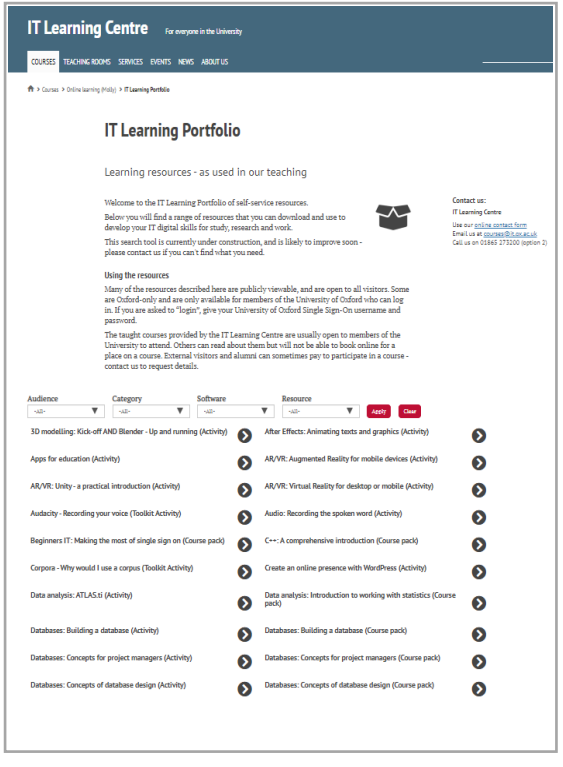
New values recalculate!

Build more formulae that depend on these

Find the resources for this workshop in our IT Learning Portfolio

Download the files (and more) from the IT Learning Portfolio at

skills.it.ox.ac.uk/it-learning-portfolio



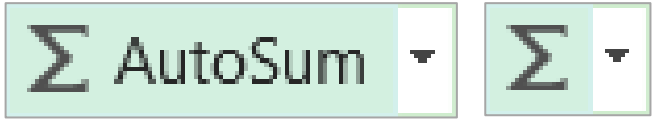
Practical Session 1

Learning Objective	Workbook	Worksheet
One	**formula writing activities.xlsx**	
Two	**formula writing activities.xlsx**	**Task1, Task2, Task3**

Adding up a column of data

Formula is like

=SUM(list of info)



	A	B	C	D	E	F
1	Annual leave calcs					
2						
3	15	days taken already				
4	27	days allowed				
5	12	days left				
6	90	hours left				
7						
8	Hours worked in Trinity Term					
9	week 1	23				
10	week 2	28				
11	week 3	6				
12	week 4	25				
13	week 5	30				
14	week 6	25				
15	week 7	14				
16	week 8	20				
17		171				
18						

Practical Session 2

Learning Objective	Workbook	Worksheet
Three	**formula writing activities.xlsx**	**(Remaining tasks)**

More help with spreadsheets

Other related courses

Spreadsheets:
Good Practice in spreadsheet design

Spreadsheets:
Dealing with that difficult spreadsheet

... and courses on charts, pivot tables, statistics functions, lookups and more

See the schedule online

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