

ISD Digital Skills Development Course Catalogue

Click on a heading below to jump to the course you are interested in. To book a course, visit the [UCL training booking system](#). Note that not all courses are available this term but you can register your interest on the booking system to be contacted about future dates.

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A Quick Introduction to UNIX

This course is designed as a beginner's guide to the **Unix and Linux** operating systems which have long been popular in academic contexts.

If you are already familiar with the UNIX command line, this course is not likely to be suitable and you should consider the course **Further Unix** which concentrates on data manipulation with command line tools such as grep, sed and awk.

Because of its in-built strengths in network computing multi-threading multi-user computing, Unix forms one of the backbone technologies of the World Wide Web and as Linux is becoming increasingly popular as an operating system on desktop computers. The course covers the most basic and frequently used Unix / Linux commands and introduces important concepts in security and managing your computing environment.

Outline

- Introduction to Unix/Linux
- What is Unix?
- Types of Unix
- Files and processes
- The shell and subshells
- The Directory Structure
- Managing Files and Directories
- Understanding pathnames
- Working with Files on the screen
- Searching the contents of a file
- Redirecting Output
- Wildcards
- Getting Help
- File system security (access rights)

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

Candidates should have good basic personal computer skills (keyboarding and using the mouse) and will find a basic understanding of concepts such as files and folders useful.

Further UNIX

This course introduces techniques in manipulating data files with UNIX using command line tools including grep, cut, sed and awk. Some basic elements of scripting may be included if time allows.

Outline

- Selecting rows of data
- Selecting columns of data

- Cutting and joining data
- Piping commands
- A first look at AWK

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

A good understanding of basic command line techniques such as creating text files, copying, moving and deleting files, and navigating the file structure is essential.

[Introduction to Matlab](#)

This course introduces attendees to the basic elements of the Matlab programming language and programming environment. It is designed for those with little or no knowledge of Matlab and assumes no knowledge of programming.

Outline

- Identify features of the Matlab desktop
- Simple arithmetic at the command line
- Create and use a variable
- Creating matrices
- Arithmetic with matrices
- Manipulating matrices
- Saving data
- Reading data
- Creating 2d and 3d Plots
- Programming - writing scripts and functions

Delivery

This course is delivered over two days in trainer led sessions.

Pre-requisites

You must have a good understanding of Microsoft Windows.

[Introduction to Visualising Data with Matlab](#)

This course introduces attendees to the basic function of 2D and 3D plots in Matlab. This is a follow-on to the course Introduction to Matlab. It is designed for those with little or no knowledge of Matlab plotting functions, but who have understood the basic elements of the Matlab programming language.

Outline

By the end of the course you will be able to:

- Understand and create the basic features of plots: simple 2-D plot; line and marker properties; multiple lines; label, title and legend; adding text; controlling axis; figure handling; saving figures
- Create 2D plots: scatter plot, histograms and heatmap
- Create 3D plots: mesh and surface

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

Knowledge of basic elements of the Matlab programming language and programming environment is essential but experience with plotting function is not required. We strongly suggest that you attend the **Introduction to Matlab** prior to attending this course.

Excel 2016 Essential Skills (staff only)

This course covers how to create, import, export and edit data. It will also show you how to select cell ranges, enter and manipulate formulas and perform basic functions such as in electronic worksheets and to manage workbooks.

The course equips candidates with the pre-requisites for our further Excel courses.

Outline

- Input and edit data
- Format data and worksheets
- Enter formulas and functions
- Sort and filter data
- Customise layouts
- Streamline workflow
- Import and export data

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

This course assumes little knowledge of Excel but it would be beneficial to go through the recommended resources in Moodle which would give you a general understanding of spreadsheets and working in Excel 2013.

Please visit our [ISD Digital Skills Development](#) Moodle course for details.

Excel Essential Skills - WORKSHOP 1

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Excel Essential Skills trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Create an Excel workbook
- Make changes to workbook properties
- Rename a sheet
- Enter and edit column headings and row labels
- Use the fill handle create a series
- Re-size columns
- Create simple formulas
- Use an absolute reference in a formula
- Format cells appropriately according to their content
- Add comments to cells
- Prepare a worksheet for printing

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

There are no pre-requisites for this workshop. Please note that in order to progress to Workshop 2, you will need to complete Workshop 1.

[Excel Essential Skills - WORKSHOP 2](#)

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Excel Essential Skills trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Import a text file into Excel
- Format cells appropriately according to their content

- Apply multiple level sorting to a dataset
- Apply filters to a dataset
- Apply subtotals to a dataset
- Freeze rows
- Hide and show columns
- Create custom views
- Re-arrange columns
- Duplicate worksheets
- Delete rows
- Transpose data from columns to rows or vice versa

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

You must have completed **Excel Essential Skills - WORKSHOP 1** before participating in this workshop. You will be invited to book onto this workshop once you have completed the tasks in Workshop 1.

Excel Essential Skills - WORKSHOP 3

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Excel Essential Skills trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Name a cell or range of cells and make changes to names
- Use conditional formatting
- Use aggregate functions to find minimum, maximum and average values
- Use Excel's Quick Analysis tool
- Use the IF and AVERAGE IF functions
- Use Excel's Insert Function wizard
- Perform calculations involving dates
- Use a function to round values up or down

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

You must have completed **Excel Essential Skills - WORKSHOP 2** before participating in this workshop. You will be invited to book onto this workshop once you have completed the tasks in Workshop 2.

Excel 2016 to manage lists (staff only)

This course is designed to help you use Excel to manage your data, in much the same way as you would use a simple database. It is aimed at those who have a good understanding of the basic use of Excel for entering data.

Outline

- Enter and manipulate data
- Working with sorts and filters
- Outlining
- Views
- Conditional formatting
- Data forms
- v-lookups and h-lookups

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

There are a number of pre-requisites for this course. Please visit our [ISD Digital Skills Development](#) Moodle course for details.

Pivot Tables with Excel 2016

Pivot Tables allow you to organise and summarise large amounts of data by filtering and rotating headings around your data. This course also shows you how to create Pivot Charts.

Outline

- creating a Pivot Table
- rearranging data in a Pivot Table
- summarising data in different ways
- formatting data
- changing display options
- grouping data
- sorting and filtering data
- creating Pivot Charts

Delivery

This is a trainer-led 2 hour session.

Pre-requisites

In order to benefit fully from this course you need to be able to:

- Select non-adjacent data
- Create charts

Please visit our [ISD Digital Skills Development](#) Moodle course for details.

Charting with Excel 2016

This session is for those familiar with Excel who would like to start to use it to create charts.

Outline

- overview of chart types
- creating charts
- modifying existing charts
- combination charts
- plotting non-adjacent cells
- adding error bars to charts
- printing charts
- common mistakes
- trendlines

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

In order to benefit fully from this course you need to be able to:

- Select non-adjacent data
- Create and using basic formulas
- Utilise basic functions e.g. SUM, COUNT

Please visit our [ISD Digital Skills Development](#) Moodle course for more details.

Intermediate statistics with Excel 2016 (staff only)

This is not a statistics course nor is it a basic Excel course. Participants must have an adequate statistical understanding and hold some pre-requisite Excel skills. Please visit our [ISD Digital Skills Development](#) Moodle course for details.

This course is aimed at those who would like to learn how to write formulae and use functions in Excel for basic statistical purposes. The course includes major descriptive measures, the computation of variance by hand and correlations.

Outline

- Measures of location
- Measures of diffusion
- Measures of shape
- Frequency
- Correlation

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

There are a number of pre-requisites for this course. Please visit our [ISD Digital Skills Development](#) Moodle course for details.

You should ensure that you have all the relevant pre-requisite skills OR attend our Excel 2013 Essential Skills workshops or course prior to attending this course.

Advanced statistics with Excel 2016

This is not a statistics course. Participants must already have adequate statistical knowledge.

The purpose of this course to introduce you to more built-in Excel statistical functions, the functions in the analysis tool pak and to consolidate your skill in building complex formulae by hand. The course covers major descriptive measures, some parametric tests, chi-square testing of association and linear regression.

Outline

- Activating the analysis tool-pak
- Descriptive statistics
- Comparing means (for two groups)
- The chi-square test
- Computing regression coefficients
- Regression using the tool-pak

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

In order to benefit fully from this course you need to be able to:

- Select non-adjacent data
- Create and using basic formulas
- Utilise basic functions e.g. SUM, COUNT
- Use of sort/filter

- Naming ranges
- Using the fill handle
- Relative vs absolute cell referencing

Please visit our [ISD Digital Skills Development](#) Moodle course for details.

These skills are covered in **Excel Essential Skills Workshop 1** and the **Excel Essential Skills** trainer-led course.

[LaTeX with NatBib](#)

This course introduces the main elements of typesetting with LaTeX and using the Natbib citation package.

Outline

- Overview of TeX and LaTeX
- The structure of LaTeX documents
- The document production flow using LaTeX
- Formatting and layout
- Natbib citations and databases

Delivery

This course is delivered as a one day trainer-led session or two half day trainer-led sessions.

Pre-requisites

You should be a confident computer user and should understand the use of bibliographies.

[Managing Long Documents in Word 2016 \(staff only\)](#)

This is an intensive course for anyone who needs to work with long documents in Word.

Outline

- styles
- table of contents
- table of figures
- cross referencing
- sections

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

You **MUST** be able to use the following Word features in order to attend this course:

- selecting text

- moving around your document
- formatting text
- moving and copying
- find and replace
- proof-reading tools
- viewing modes
- page setup, e.g. changing margins
- print preview and printing
- using help

If you are not confident in these features, we recommend the [Word for Long Documents pre-requisite skills](#) playlist in Lynda.com.

Word Essential Skills – WORKSHOP 1

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Managing Long Documents in Word 2016 trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Customize the Word interface
- Set up page layout
- Insert and format text
- Set up document properties
- Use Views
- Use in-built heading styles
- Add character formatting
- Use page breaks
- Use the navigation pane
- Save a document as a template

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

There are no pre-requisites for this workshop. It is recommended that you attend the workshops in numerical order if you can.

Word Essential Skills – WORKSHOP 2

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Managing Long Documents in Word 2016 trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Create a new document based on a template
- Insert text from a file
- Modify in-built styles
- Create numbered headings via multi-level lists
- Create and apply styles
- Create and modify a Table of Contents
- Create and customise page numbering
- Insert fields such as file name, date and path in headers and footers
- Insert figures, captions and a Table of Captions

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

There are no pre-requisites for this workshop. It is recommended that you attend the workshops in numerical order if you can.

Word Essential Skills – WORKSHOP 3

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Managing Long Documents in Word 2016 trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Create and format Sections
- Embed and edit Objects
- Refresh a Table of Captions
- Use Split Window
- Add Bookmarks
- Use Cross-referencing
- Use Go To
- Create Footnotes and Endnotes
- Set your document up for printing
- Create a PDF of your document
- Use Find

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

There are no pre-requisites for this workshop. It is recommended that you attend the workshops in numerical order if you can.

Word Essential Skills – WORKSHOP 4

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Managing Long Documents in Word 2016 trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Apply and modify bullets or numbering
- Apply and modify indents including hanging indents
- Align decimals
- Create and modify tables
- Arrange document into columns
- Insert images
- Wrap text around images

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

There are no pre-requisites for this workshop. It is recommended that you attend the workshops in numerical order if you can.

Word Essential Skills – WORKSHOP 5

Our workshops take a new approach to learning by presenting you with a problem to be solved and encouraging you to use your prior experience, web searches, in-application help and fellow participants to find a solution to the task.

By the end of the session you will have improved problem-solving skills, an increased knowledge of the topic, a 'suggested solution' to the problem you worked on and some resources and guidance for further learning.

These sessions are aimed at students and staff may prefer to attend the Managing Long Documents in Word 2016 trainer-led course.

Outline

On successfully completing the workshop tasks you will be able to:

- Find and modify Options in Word
- Check spelling and grammar
- Use Find and Replace
- Use in-built Auto-correct and create your own
- Create Building Blocks
- Check the word count of your document
- Insert Symbols
- Customize the Quick Access toolbar and the ribbon
- Use Smart Art

Delivery

This is a facilitated one hour session. You can attend further sessions if you don't complete the tasks within one session.

Pre-requisites

There are no pre-requisites for this workshop. It is recommended that you attend the workshops in numerical order if you can.

Getting Started with SPSS

An introduction to using SPSS for those familiar with basic descriptive and inferential statistics.

Outline

- data organisation and the data editor
- defining and entering data
- labelling variables and values
- the Viewer window
- computing new data
- initial data analysis
- the Frequencies command
- cross-tabulating data
- the means command
- further graphics
- printing graphs
- missing values

Delivery

This course is delivered as a one day trainer-led session or two half day trainer-led sessions.

Pre-requisites

You should have a good understanding of statistical concepts. No prior experience with SPSS is required, but experience using a spreadsheet application such as Excel would be an advantage.

Getting started with Stata

This is a first look at Stata for absolute beginners and covers basics of data management, descriptive statistics, basic plots and some hypothesis testing.

Outline

The material to be covered includes:

- The Stata program environment
- Entering data
- Browsing data
- Editing data
- Describing data
- Computing values
- Simple recoding
- Simple descriptive statistics
- Recoding values
- Simple hypothesis testing
- Producing basic plots

Delivery

This course is delivered as a one day trainer-led session or two half day trainer-led sessions.

Pre-requisites

Attendees should have a good understanding of basic statistics.

[An Introduction to R with RStudio](#)

This course is designed to help you to use R and RStudio to import, manipulate, describe and analyse categorical and continuous data and to produce plots and tables to support analysis. Participants will also be introduced to literate programming in R as a method supporting reproducible research.

Although this course takes place in a computer workroom, you will need to bring a laptop with R and RStudio installed. If you do not, you will find that some material does not work on UCL desktop machines.

You can download R [here](#) and Rstudio [here](#)

Outline

- Explain and use basic R-studio command line R statements
- Import datasets in to the R-studio workspace from plain text and Excel file formats
- R help and documentation
- Add on packages in R
- Explain and use some R data structures
 - vectors
 - matrices
 - dataframes
- Perform basic data manipulation routines in R
 - label variables and factor levels
 - derive new variables from existing data
 - transform variables e.g.
 - use log transformation of skewed data
 - create ordinal from continuous data
 - test data for normality
- Summary statistics and tables in R
 - location
 - diffusion
 - shape
- Simple R plots
- Statistical testing in R
 - the general linear model
 - the t test
 - the anova
 - simple linear regression
 - multiple regression
 - categorical predictors
 - tabulations and tests of independence
- Basic literate programming with R and Rmarkdown: reproducible analyses

Delivery

This course is delivered as a one day trainer-led session or two half day trainer-led sessions.

Pre-requisites

Participants should have an adequate knowledge of statistical methods and some general familiarity with computers.

Data Visualization in R with ggplot2

This course introduces you to data visualization in R using the ggplot2 package. The ggplot2 package implements the grammar of graphics concepts for creating visually appealing and professional looking graphics in R.

Basic knowledge of working with datasets in R is essential but experience with plotting functions is not required.

Although this course takes place in a computer workroom, you will need to bring a laptop with R and ggplot2 installed. If you do not, you will find that some material does not work on UCL desktop machines.

Instructions for downloading both R and ggplot2 can be found [here](#)

Outline

By the end of the course you will be able to:

- Create scatterplots, histograms, line graphs, and boxplots
- Add chart labels, axis labels and legends to the plots
- Apply statistical transformations to the plots
- Change various attributes of plot layers including colour, shape, size and scale
- Create multiple plots in a single figure using facets
- Apply themes to change the appearance of the plots

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

Basic knowledge of working with datasets in R is essential but experience with plotting functions is not required.

[This link will explain how to install both R and ggplot2 if you have not already installed them.](#)

Data Manipulation in R with Rstudio

Data manipulation is the process of cleaning, organising and preparing data in a way that makes it suitable for analysis. Most real-world datasets require some form of manipulation to facilitate the downstream analysis and this process is often repeated a number of times during the data analysis cycle.

In this workshop you will learn how to apply a consistent grammar of data manipulation to raw data and prepare it for analysis.

Although this course takes place in a computer workroom, you will need to bring a laptop with R and RStudio installed. If you do not, you will find that some material does not work on UCL desktop machines.

You can download R [here](#) and Rstudio [here](#)

Outline

- Learning to use the grammar of data manipulation
- Merging multiple datasets and creating subsets using filters
- Reshaping data between long and wide formats
- Summarising data with group-wise operation
- Setting up data pipelines for efficient data manipulation

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

This workshop is designed for individuals who are already familiar with R but wish to learn efficient techniques for data manipulation.

[Introduction to Photoshop CS4](#)

This course provides an introduction to Photoshop CS4 and covers all the basic tools required to prepare an image for use online.

Outline

- Photoshop CS4 Interface
- Navigating your document
- Selections and Advanced Selections
- Painting Tools
- Cropping and Transformations
- Filters
- Layers
- Adjustment Layers
- Saving for the web

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

You should be a confident IT user. No prior experience with Photoshop CS4 is required. If you have advanced skills in another graphics package you will probably find this course unnecessary.

Portico - Assessments & Awards (staff only)

This course is aimed at staff who are involved in the assessment and awards process and who need to get the highest level of access to the related Portico functions. Before undertaking any training on Portico it is vital that your Head of Department has requested the appropriate access level on your behalf.

You should also complete the activities in the topic **Basic Portico Navigation and Use** from the [Using Portico Student Information Systems](#) course and the **Data Protection and Destruction** of the [Information Security Awareness](#) course (both online in Moodle) before attending.

See **Prerequisites** (below) for details.

Outline

- processing module results
- managing reassessment
- progression /awards calculation
- reporting
- progression/awards confirmation

Delivery

This is a trainer-led 3 hour session.

Pre-requisites

Examinations Processing functions at level 3.

Complete the activities in the topic **Basic Portico Navigation and Use** from the [Using Portico Student Information Systems](#) course.

Complete the **Data Protection and Destruction** section of the [Information Security Awareness](#) course.

Kick-starting your literature review

This course aims to help you leverage some simple software tools to kick-start your literature review. The course will start with a review of library and literature searching techniques including creating appropriate search strategies and using appropriate databases.

We will explore the use of Firefox with Zotero for building a database of literature - the bibliographic database - and some Zotero plugins that will give us useful added functionality.

We will learn how to annotate PDFs from Zotero and how to extract and report on annotations to produce rich reports of the literature.

This is a **bring your own device** session and if you bring a laptop with an up-to-date installation of Firefox you will be able to install the software to be used and practise the techniques described.

Outline

- searching for relevant literature
- organising reference data
- annotating literature with Zotero and with Adobe
- generating an editable report on selected data with Zotero and Word

Delivery

This is a three hour hands-on workshop.

Pre-requisites

There are no pre-requisites for this course.