



Course/Tutorial	Content
1. Khan Academy	Introductory mathematical concepts: Categorical data and analysis, quantitative data—displaying, summarizing, modelling. Bivariate numerical data. Probability, sampling distributions. Confidence intervals, significance (hypothesis) testing. Inferential statistics including chi-squared, regression, and analysis of variance (ANOVA).
2. Lynda.com	Free access. Log on using your JCU username and password.
Statistics Foundations: The Basics	Descriptive statistics, mean, median, range, standard deviation, spread of data, distribution curves, probability, and z-score as a measure of distance from the mean.
Statistics Foundations: 2	Collecting data; simple random sample; assessing data validity, data size, sample size and population, and hypothesis testing.
Statistics Foundations: 3	Small sample sizes, comparisons of two populations, chi-square Goodness of Fit, ANOVA, and regression.
Excel 2016 Essential Training	Fundamental concepts of descriptive and inferential statistics and how to apply them using Microsoft Excel. Hypothesis testing, ANOVA, regression, and correlation.
Excel Statistics Essential Training: 2	Using statistical concepts and tools to perform analysis in Microsoft Excel. Organising and presenting data, Solver and Analysis ToolPac add-ons. Linear, multiple, and non-linear regression, forecasting and running simulations.
SPSS for Academic Research	How to run and interpret data for the most common types of quantitative tests using SPSS: <i>t</i> -tests, ANOVA, and statistical measurement. Also covers data types, sample size, normal distribution, and the Central Limit Theorem.
SPSS Statistics Essential Training	Importing spreadsheets, build charts, calculate descriptive statistics, <i>t</i> -tests, chi-squares, correlations, contingency tables, multiple regression analysis, formatting, and exporting presentations.
R for Excel Users	Introduction to R for those familiar with Excel and basic statistics. Installing R, DescTools, working between Excel and R. bivariate analysis. Note: RDCOMClient not visible in packages list, instead paste this command and hit enter: <code>install.packages("RDCOMClient", repos = "https://www.omegahat.net/RExcelXML/")</code>
R Essential Training: Wrangling and Visualizing Data	Introduces and uses R Studio, importing data, working with data files, colour palettes, charting one variable, descriptive statistics, bivariate plots and statistics, multivariate plots, and statistics.



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Learning R	More compact version of the R Statistics Essential Training (2013).
Python for Data Science Essential Training: 1	Charts, time series and statistical plots, data analysis basics, machine learning introduction, and methods.
3. R for Data Science	Importing, structuring, transforming, visualizing, and modelling data.