

A LEVEL MATHEMATICS



Course description

Awarding Body: Edexcel

<https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/statistics-2017.html>

Examinations

Three two-hour exams are sat at the end of Y13:

- Paper 1: Data and Probability
- Paper 2: Statistical Inference
- Paper 3: Statistics in Practice (Non Examined Assessment: None)

Course content

Numerical measures, graphs and diagrams, Probability, Population and samples, Introduction to probability distributions, Binomial distribution, Normal distribution, Correlation and linear regression, Bayes' theorem, Probability distributions, Experimental design, Exponential and Poisson distributions, hypothesis testing, Contingency tables, One and two sample non-parametric tests, Experimental design, Sampling, estimates and resampling, confidence intervals, Paired tests, Goodness of fit, Analysis of variance.

Entry requirements

Grade 7, 8 or 9 in GCSE Mathematics.

Future opportunities

A-Level Statistics will provide essential support for many other A-level subjects and should be strongly considered by anyone studying: Biology, Psychology, Economics or Geography as this subject covers all the Statistics needed for these A-levels. (note much of this is not covered in the Statistics part of A-level Mathematics.) Any aspiring Medics would find this subject useful as it will cover much of the Statistics that is taught on a Medicine degree. Most STEM subject or Finance related degrees will require the content of this subject and thus Statistics A-level is probably the A-level you are most likely to use the knowledge obtained in it at undergraduate level. It is an essential part of a plethora of careers. Working with data and an understanding of Statistics will be necessary for pretty much any modern career, especially careers in: Finance, Medicine, Psychology, Economics, Science, Computing or similar STEM subjects.

Further information

Who should Study Statistics?

As Statistics is a new A-level and A-level Mathematics is well established and required entry for many degrees if choosing between A-level Mathematics and Statistics then currently we recommend you choose A-level Mathematics. The exception is if you want to do a numerate A-level but have found the algebra content of Mathematics GCSE very demanding.

Statistics would be especially useful as a 4th A-level if you have already done an extra GCSE Mathematics qualification (such as L2 AQA Further Mathematics or L3 OCR FSMQ) but do not want to commit to the much more demanding Further Mathematics A-level. If you have done any of these qualifications then you are likely to find the early part of Mathematics A-level straightforward and a repeat of the content of the Further Mathematics GCSEs and thus you will have time to focus on the content of new content taught in A-level Statistics.

What skills do I need to succeed at Statistics?

You should achieve a grade 7 or higher in GCSE Mathematics and thus have good numeracy skills. Obviously an understanding of the minimal Statistics currently taught as part of GCSE Mathematics will help.

Other Information

Please also note that you will need a new calculator for A-level that has some statistical data tables included on it. The recommended calculator for A-level Statistics will be the CASIO CG50 that can be purchased from Newstead Wood for £75 (RRP £110).