

A level Statistics

Why study Statistics?

- Careers with good statistical skills are often well paid, interesting and rewarding.
- Statistics is the most widely used branch of mathematics in industry and commerce.
- A Level Statistics is a versatile qualification respected by employers and enables students to become better at analysing data and using this to make predictions about future events.
- This course will suit those students who enjoy applying their numerate skills without the need to employ algebraic techniques.

Why study Statistics at Solihull Sixth Form College?

- The Mathematics Department is staffed by well qualified and experienced teachers of Statistics who use a variety of teaching methods to support your learning.
- Graphical calculators are used to support, develop and enhance many of the new concepts learnt.
- There is a team of enthusiastic teachers who create a vibrant environment with the students' interest at heart.
- There are well developed resources that are given to each student at each point of the course..



Case Study

Among the recent successful students to have taken this course is **Hetisham Hetisham**.

He came to the College from Al Hijrah School to study A levels. He achieved B grades in Statistics, Biology and Chemistry at A level and progressed to Birmingham City University to study Biomedical Sciences.



What our students say about their experience of studying Statistics:

"The teaching is high quality and teachers are experts in their subject. Lessons are challenging and productive and students are encouraged to push themselves so that they can reach their potential. Teachers support students through intervention, workshops and 1-to-1s. There is access to a wide range of additional resources that help students to make progress and as a result, students gain confidence and become more independent."



Course Outline

Year 12

Students will work with real data sets extending the work they have covered in GCSE Maths, such as the calculation of the numerical measures mean, median and mode, and the practical applications of correlation and regression, including Time Series Analysis in the world of business. Elementary probability theory is also studied, and the Binomial and Normal distributions are introduced. Different methods of sampling are studied, and we also study basic hypothesis testing. Topics which appear in such subjects as Biology, Psychology, Geography and Medicine include Chi-squared Contingency Tables, Spearman's Rank Correlation Coefficient, and the Wilcoxon tests.

Year 13

The work on basic probability is extended to include Bayes' theorem and in addition to revisiting the binomial and normal distributions we also introduce the Poisson and exponential distributions. We test the goodness of fit for various distributions and carry out hypothesis tests for two samples and paired samples. In addition, we consider the industrial and manufacturing application of statistics, including experimental design and analysis of variance.

Students are expected to undertake 5 hours of work away from the classroom each week.

Assessment

No Coursework
Examination (100%)
Examining Board – Edexcel.

Special Entry Requirements

Grade 5 or above in GCSE Mathematics higher level. In addition, standard A level entry requirements apply - see www.solihullsf.ac.uk/courses/entry-requirements.

Prohibited Options

Mathematics.

What do our students go on to do?

There is a countrywide shortage of people with strong statistical skills, for example Medical Statisticians, so career prospects are enhanced by taking this course. A number of degree programmes contain significant amounts of statistics. These include Psychology, Biology, Business Studies, Management Science, Medicine, Dentistry, Geography, I.T., Government and Politics, Pharmacy and others.

Cost Implications

You will be expected to purchase a graphical calculator (Casio Graphics Calculator FX-9750GII) for use on the course and some work will be done using computers.

Complementary Subjects or Enrichment Courses

Geography, Psychology, Business Studies, Economics, Biology, Chemistry, Physical Education or any social science or humanities course.

Examination Results

The full breakdown of results in the past three years is as follows:

Year	Entry	A*	A	B	C	D	E	U	A-E%
2018	22	0	0	4	9	3	2	4	81.8%
2019	33	0	0	7	11	7	6	2	93.9%
2020	26	0	0	6	11	4	5	0	100.0%

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