

The Further Mathematics Support Programme

Using technology in the 2017 Statistics classroom

A comprehensive look at the use of technology in enhancing the learning of Statistics in the 2017 A level Mathematics course, offered at two venues in the South West:

South Wilts Grammar School, Stratford Road, Salisbury SP1 3JJ

Thursday 22nd June 2017, 09:30 – 16:00

Ivybridge Community College, Harford Road, Ivybridge PL21 0JA

Thursday 6th July 2017, 09:30 – 16:00



This one-day course is ideal for all teachers who will be teaching the A level Mathematics course from September 2017.

The course will look at how to embed a range of technologies into the teaching of the statistics element of the course in order to illuminate new topics and re-engage students with familiar ideas.

Course outline:

Course aims:

- To support teachers in using technology to enhance their teaching of the Statistics element of A level Mathematics from September 2017.
- To enable teachers to see how technology can enrich student experience, create a work-ready approach to analysing data and illuminate new and familiar topics
- To consider how to balance the need for technology to enhance learning with the need to support students in using technology for assessment.

Topics which may be included in the day:

The large data set

- A deep look at how students might use technology to gain familiarity with the large sets of data as required in the new Mathematics A level.

Binomial Distribution*

- Use of probability calculators
- Use of calculator in exam questions

Normal Distribution*

- Tests for normality
- Use of calculator in exam questions
- Sampling distributions, leading to the central limit theorem

Random Sampling

- Taking random samples
- Looking at the variation in samples and comparing them to the population parameters

Hypothesis Testing*

- Use of technology to introduce the concept of critical regions
- Using technology to select a random sample and test a hypothesis

We may not have time to include all of these topics on the day.

Technologies which will be used on the day:

- GeoGebra <https://www.geogebra.org/>
- Graphic and Enhanced Scientific Calculators (Casio Classwiz 991-EX and Texas TI-30X Pro)
- Excel
- Gnumeric
- PyQRS <http://members.home.nl/sytse.knypstra/PQRS/>

*NB: Basic methods which will NOT be included:

We will assume attending teachers have a working knowledge of the basic techniques of:

- The Binomial and Normal Distributions
- Hypothesis testing

Course fee and application:

The fee for this course is £50.

To apply, please complete the online form at: <https://goo.gl/forms/YaT5qxo90H8raT243> by the closing date of Thu 15th Jun (Salisbury) or 29th Jun (Ivybridge).

For more information email:

josibley@furthermaths.org.uk (Salisbury event)

margaretharding@furthermaths.org.uk (Ivybridge event)