



Advanced Mathematics  
Support Programme®

Continuing Professional  
Development  
Standard

National Centre  
for Excellence in the  
Teaching of Mathematics



## Teaching Statistics 2 (TS2) Online and Coventry

4th March 2020

### Overview

Teaching Statistics 2 (TS2) is a [sustained professional development course](#) for teachers wishing to further build their confidence in teaching statistics. TS2 covers most of the statistics content from all major specifications for AS/A level Further Mathematics.

TS2 features:

- 9-10 live online tutorials
- two study days
- a textbook to support your studies
- access to online teaching and learning resources
- email support from a tutor and access to an online group forum

Towards the end of the course a short assignment is issued, for which support and guidance are provided. Course certificates will be available for those participants completing the assignment.

In order to enrol on the TS2 course, participants should have a reasonable understanding of the statistics content of AS/A level Mathematics, ideally through having completed [TS1](#) although this is not compulsory.

### Aims

- Gain a deeper understanding of statistics
- Continue to develop confidence and skills to teach statistics for AS/A level Further Mathematics, focusing on subject knowledge and effective pedagogy
- Continue to develop confidence in working with technology to aid understanding of statistical concepts

### Who will benefit from attending?

TS2 is designed for teachers who are currently teaching A level Further Mathematics, or who wish to teach it at some point in the near future.

Our sustained courses enable teachers to broaden and deepen their subject, pedagogical and pedagogical content knowledge. Teachers, with enhanced subject knowledge, are therefore better equipped to make links between topics, address students' misconceptions and confidently challenge learners at all attainment levels. Our course aims and intended outcomes are consistent with the principles set out in the Education Inspection Framework.

## Content

TS2 covers most of the statistics content for AS/A level Further Mathematics and also A Level Statistics. This includes the following topics:

- Properties of discrete and continuous probability distributions
- Further probability distributions
- Bivariate data and regression
- The central limit theorem
- The normal and t distributions
- Confidence inferences and hypothesis tests
- Chi-squared tests and non-parametric tests
- Probability generating functions
- Analysis of Variance

## Materials and Equipment

A computer with a reliable internet connection will be required to attend the online tutorials. In addition, a headset with a microphone is suggested to get the best experience of the online tutorials.

## Frequently Asked Questions

### **Do I need to have taught A level Mathematics before doing the TS2 course?**

There is no requirement that applicants have taught A level Mathematics before undertaking TS2.

### **How much time will I need to devote to studying?**

It is difficult to be specific as this will depend on previous experience. In the past, delegates have reported spending between 1 and 4 hours studying each week. Ideally, delegates should aim to study regularly for a few hours each week however, in reality many working teachers have weeks when this is difficult and they use out-of-term time to catch up.

### **Do I have to hand in any work during the course?**

The TS2 assignment is the only work that delegates hand in. The assignment requires you to answer questions based around data sets and probability. Use of technology is encouraged and an explanation of how the topics could be introduced and taught in the classroom is expected. To receive a certificate at the end of your TS2 course you will need to submit and pass the TS2 assignment. Certification is optional but we strongly encourage you to submit an assignment anyway to help you consolidate what you have learnt. In the past most teachers have chosen to submit an assignment.

Teachers working at state-funded schools/colleges need to demonstrate that they have engaged with the course unit to trigger a course fee reimbursement at the end of the course. If you have missed either study day you may be required to submit the TS2 assignment in order to qualify for the course fee reimbursement whether or not you wish to certify.

### **When do the TS2 course fees have to be paid?**

An invoice for course unit fees is issued after enrolment at the start of the course unit. Invoices are issued no later than one month after a delegate has started their course.

### **How does the subsidy for teachers in state-funded schools/colleges work?**

The AMSP is supported by the Department for Education and therefore only course fees for teachers working in state-funded schools/colleges in England are eligible for a subsidy. If the course fee is paid by the applicants school /college then the same school/college will receive the subsidy when the course is completed by the applicant.

### **Can I pay my own course fee?**

Yes, you may choose to pay your own course fee. Applicants who are teachers working in state-funded schools/colleges in England are still eligible for a course fee subsidy. If the course fee is paid directly by the applicant then the applicant will receive the fee reimbursement on completion of the course. It is a requirement that the applicant submits an email address that has been issued by the state-funded school/college where they are employed and that the applicants email address is substantiated.

### **What happens if I can't attend one or more of the study days?**

Teachers on the course enjoy the study days and appreciate the chance to meet up with other teachers on the course. Study day materials are shared with all course delegates afterwards. If you are a teacher working at a state-funded school/college then to be eligible for a course subsidy you will need to demonstrate that you have engaged with the course, which includes the expectation that you will attend the face-to-face study days.

If you are unable to attend a study day and this is due to unforeseen or special circumstances then the course fee reimbursement may still be granted at the discretion of the Course Leader. You may be required to submit the TS2 assignment as additional evidence of engagement with the course. If you pass the end of unit assignment, you will still be eligible for a TS2 course certificate.

## Eligibility

Participants must have a reasonable understanding of the statistics content of AS/A level Mathematics, ideally through having completed [TS1](#) although this is not compulsory.

## Cost

The course fee for TS2 is £300.

If you are working in a state-funded school or college, participation in this course attracts a reimbursement of course fees, subject to engagement and completion of the course.

Schools and colleges located within [Priority Areas](#) are eligible to receive a further subsidy of £500 to support staff cover and travel costs.

# Study Schedule

## Study days

Study day 1:

**Coventry**  
Saturday 21 March 2020

Study day 2:

**Coventry**  
Saturday 20 June 2020

Venue details:

Venue	Address
<b>Coventry</b>	Centre for Teacher Education, Westwood Lecture Theatre, Kirby Corner Road, Westwood Campus, University of Warwick, Coventry, CV4 8EE

## Online sessions:

Online sessions are conducted live and recordings are available for playback.

The dates below are provisional:

Evening online tutorials (19:00-20:00)	Study content
Wednesday 4 March 2020	Sampling & the central limit theorem
Wednesday 18 March 2020	Random variables 1
Wednesday 1 April 2020	Random variables 2
Wednesday 22 April 2020	Further probability distributions
Wednesday 6 May 2020	Comparing two groups
Wednesday 20 May 2020	Chi squared tests
Wednesday 3 June 2020	Probability generating functions
Wednesday 17 June 2020	Variance 1
Wednesday 8 July 2020	Variance 2

## Assignment:

During July you will work toward completing an assignment. The deadline for this assignment is 30 August 2020.

Unit certification: 30 Sept 2020 (or before)

## Participant feedback

?  
*Good lively examples to help bring Stats to life!*

?  
*Lots of things I can use practically!*

?  
*Great sessions - good to get hands on with data sets!*

## Key Facts

<b>Event ref:</b>	#6725
<b>Audience:</b>	Teachers
<b>Curriculum focus:</b>	A level Further Mathematics
<b>Mathematical focus:</b>	Statistics
<b>Event format:</b>	Sustained Professional Development
<b>Event length:</b>	6 months
<b>Study days:</b>	2
<b>Online sessions:</b>	9
<b>Region:</b>	National
<b>Venue:</b>	Online classroom with study days in Coventry
<b>Next session:</b>	Wed 18th Mar 2020
<b>Fee:</b>	£300
<b>State-sector subsidy:</b>	£300
<b>Priority Area subsidy:</b>	£800

## Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/6725>