

Teaching Further Mathematics 2009/10

An MEI certificated professional development programme for teachers of A level Mathematics.

Course Aims

The aim of the programme is to provide an extensive course of professional development for teachers of A level Mathematics who are now teaching Further Mathematics or wish to teach it at some point in the near future. The course will cover material from **all Further Mathematics specifications** with emphasis on expanding the participants' mathematical horizons and giving them a deeper understanding of the links within mathematics.

Course Structure

The course consists of three units that offer participants the opportunity to study the content of A level Further Mathematics modules, from a teaching and learning perspective.

Teachers enrolled on the course will receive

- textbooks for each unit of the course
- two years access the MEI online resources, which includes the student and teacher resources for the Further Pure Mathematics modules for **all specifications** and material written specifically for the course and accessible only to course participants and forums for support
- online tutorials using Elluminate*.
- email support from the unit tutor.

Participants will be encouraged to make contact with their local Further Mathematics Network centre and, where possible, attend revision days and lessons relevant to the module they are studying.

Study days

There will be three study days spread across the year:

Assessment

At the end of each unit participants will submit:

- A handwritten solution of an exam-style paper annotated with student misconceptions with reference to principal examiners' reports.
- An investigative or interactive worksheet/teaching resource for a topic in that unit.

Course completion: September 2010.

The final piece of work should be submitted by 3rd September 2010.

Course certification: November 2010.

Course fees: Fees for 2009/10 are £450

Applications should be received no later than 12th June 2009.

The course will commence on 12th July 2009.

For further information please contact: Sue de Pomerai (sue.depomerai@mei.org.uk)

It is likely that in 2009 this course will be developed to offer an optional Postgraduate Certificate which will carry 60 CAT points towards Master degree.

Course content

TFM 1: AS Further Pure Mathematics

Study day 1. Saturday 3rd October 2009, University of Warwick

Content:

- Complex numbers
- Matrices
- Graphs and inequalities
- Identities and roots of equations
- Series and proof by induction

TFM 2: A2 Further Pure Mathematics 1

Study day 2. Saturday 27th February 2010, University of Warwick

Content:

- Further complex numbers
- Further matrices
- Calculus and trigonometric functions
- Co-ordinate systems
- Power series
- Hyperbolic functions

TFM 2: A2 Further Pure Mathematics 1

Study day 3. t.b.a.

- Vectors
- Numerical solution of equations
- Differential equations
- Group theory

* Elluminate

Elluminate is a well established web-based package which is easy to use and has features that make it ideal for live mathematics tutoring. Elluminate allows a tutor and delegates to communicate live on-line using audio, handwriting on a shared virtual whiteboard and instant messaging via the internet. To take part in the online tutorials participants need

- A broadband internet connection
- A recent version of Java
- A headset for communication

A graphics tablet and pen are also useful but not essential.