



Mathematics in Education and Industry
Innovators in Mathematics Education

Continuing Professional
Development
Standard

National Centre
for Excellence in the
Teaching of Mathematics



Continuing Professional Development

for all 14-19 Mathematics teachers
of all specifications

Short professional development courses

MEI provides short CPD courses for teachers who want to widen their expertise in an area of A level Mathematics. Each course is suitable for all examination specifications and consists of a training day with a year's access to extensive on-line resources, a textbook, a series of four optional online lessons, and email support from the course tutor.

Courses currently offered include:

- An introduction to Decision Mathematics 1
- An introduction to Mechanics 1
- An introduction to Statistics 1
- An introduction to Further Pure Mathematics 1
- An introduction to OCR Additional Mathematics

Courses are held across the country, often hosted by schools or colleges.

Fees: £180 for one day and online lessons
Free to TAM participants



Live Online Professional Development

Innovative courses developed by the Further Mathematics Support Programme to enable teachers to teach A level Mathematics and A level Further Mathematics with confidence. Short (approx. 5 hours) and long (approx. 10 hours) LOPD courses are available, with weekly online sessions of 1 to 1.5 hours each, with a tutor and a small group of teachers.

Rather than attending a course away from school/college, delegates and tutor meet online, using web-based software to allow them to communicate live through audio, handwriting on a shared virtual whiteboard, shared applications and instant messaging. The online sessions aim to cover subject content common to all current specifications and to facilitate the exchange of teaching ideas.

Fees: Short course: £75

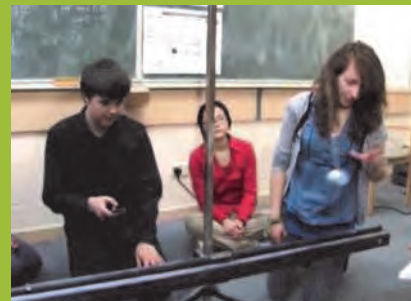
Long course: £150

"The online teaching sessions have been fundamental in improving my subject knowledge in key A level topic areas. To be able to be taught a topic, interact with the resources, ask questions – all from the comfort of your home, has been invaluable, with the additional benefit of being able to access these recordings at any time to further develop understanding."

LOPD participant



“This course has inspired me to go on to get the best out of my pupils, by actively engaging them in my lessons. I would recommend the TAM course to anyone who is new to teaching A level maths, or anyone who is open to new ways of inspiring and motivating their pupils in doing maths beyond GCSE.”
TAM participant



Teaching Advanced Mathematics course (TAM)

This part-time 16 month programme provides teachers with the subject knowledge and pedagogy to teach Advanced level Mathematics for the first time. By the end of the course participants will have the confidence to teach at this level, and to acquire the skills to teach new modules independently. Support, including access to web-based resources, continues for two years after completion of the course to help teachers as they encounter new topics.

What is covered?

The TAM course covers the content of all four English examination specifications. The content of five A level modules is studied from a teaching and learning perspective. Participants teach the equivalent of at least one A level Core Mathematics module from any specification, or Additional Mathematics (for those in 11-16 schools) in their own school or college, with visits from the course tutors. There are also university-based workshops spread across the year, focusing on A level Mathematics pedagogy.

How is it taught?

Much of the learning is online via a purpose-written website, email support and optional online lessons using a web-based facility. Teachers enrolled on the course will receive three years' access to the MEI online resources for all specifications as well as course material.

Who can apply?

Applicants should have at least one year's mathematics teaching experience at GCSE level or equivalent. Applicants are expected to hold a degree or a qualification deemed to be equivalent to a degree, but need not have a mathematics degree.

How is it assessed?

Assessment is flexible. During the course teachers are asked to compile a portfolio of module assignments, lesson plans and a commentary on one of their own videoed lessons.

Is it certificated?

A Postgraduate Certificate in A level Mathematics Pedagogy may be gained by submitting additional work in the form of essays. The Postgraduate Certificate counts for 60 CAT points which can be combined with other modules at many universities as part of a Masters degree (180 CAT points).

Course Fees

Fees for 2010/11 are £500, which, in addition to the University element, includes the following:

- textbooks for Core 1 to 4 and either M1 or D1 or S1
- three years' access to the MEI online resources for **all specifications**, including TAM-specific resources and forums
- email support and school/college visits from the course tutors
- regular optional online lessons
- free additional one day courses

“TAM was brilliant in every aspect - exciting lessons, shared activities, the BEST support possible, Elluminate lessons were very helpful, and I am still using the website on a regular basis to support my teaching/students' learning.”
TAM participant



"I am much impressed by the quality of the web resources, textbooks and lecturers. The lecturers have been most encouraging and supportive.

I would strongly recommend this course to other mathematics teachers."

TFM participant



Teaching Further Mathematics course (TFM)

This part-time 14 month programme improves the subject knowledge and skills of teachers of A level Mathematics who teach, or who plan to teach Further Mathematics. By the end of the course participants should feel confident with the mathematics covered in the modules, have been introduced to effective teaching methods and have acquired the skills to master further topics after completion of the course, with the help of the web-based resources made available to them.

What is covered?

The TFM course comprises three units, which together cover the material in the Further Pure Mathematics modules of the four English examination specifications from a teaching and learning perspective. Particular emphasis is placed on expanding the participants' mathematical horizons and helping them to develop a deeper understanding of the links within mathematics.

How is it taught?

There is a study day for each of the three course units. Each unit has a tutor who delivers online tutorials on key topics using a web-based facility that allows tutor and teachers to communicate live using audio, instant messaging, handwriting on a shared whiteboard and application sharing. The tutor also provides email support to individual students. In addition, participants have access to forums and message boards so that they can communicate with each other as well as the tutors.

Who can apply?

The course is for teachers of A level Mathematics. Participants do not need to be teaching Further Mathematics during the course; however, participants are encouraged to attend local revision days and lessons relevant to the module they are studying.

How is it assessed?

At the end of each unit participants are asked to submit a handwritten solution of an exam-style assessment, annotated with student misconceptions with reference to principal examiners' reports, and a detailed investigative worksheet or teaching resource for a topic in that unit.

Is it certificated?

TFM is certificated by FMSP/MEI. The TFM course can be studied alongside research units to gain a Postgraduate Certificate in Teaching Further Mathematics through the Institute of Education, University of Warwick. The Postgraduate Certificate counts for 60 CAT points towards a Masters degree in Teaching and Learning.

Course Fees

Fees for 2010/11 are £500, which includes the following:

- textbooks for each unit of the course
- two years' access to the MEI online resources, which includes the student and teacher resources for the Further Pure Mathematics modules for **all specifications**, TFM course-specific material and forums
- online tutorials using a web-based facility
- email support from the unit tutors

"The course has been of great use to me. I have found that it has improved my confidence massively."

TFM participant



MEI Conference

MEI holds an annual 3-day conference for all secondary teachers of mathematics, whether their aim is to improve teaching, to do some interesting mathematics, to engage with policy makers or to enjoy the company of other mathematicians. Much of the conference is devoted to workshops, covering a wide variety of topics suitable for teachers of 14-19 year olds, relevant to all exam specifications. Additionally, guest lectures are delivered by eminent members of the mathematics community.

Fees: From £125 per day per delegate

Big Ideas in A level Mathematics

MEI offers three 1-day courses designed to support teachers in their early years of teaching A level Mathematics. The courses look at some of the big ideas in more depth, including Calculus, Algebra and Trigonometry.

Each day consists of four 60-75 minute sessions, exploring A level concepts in close detail, with teaching ideas, and introducing related topics just outside the scope of A level. The three days are independent of one another.

Fees: 1 day - £100, 2 days - £180, 3 days - £250

CPD for teachers through the Further Mathematics Support Programme

One of the key aims of the Further Mathematics Support Programme is to contribute to the continuing professional development of mathematics teachers. There is a range of training offered by the FMSP, supported by local Area Coordinators.

For details of FMSP CPD events being held in your area, please see the appropriate regional events page on the FMSP website at www.furthermaths.co.uk

Fees: Please see regional web pages



CPD in use of ICT in mathematics

CPD is available in the use of ICT in the teaching and learning of mathematics. Our training can be tailored to suit specific needs; for example, the use of GeoGebra, Autograph, Excel, Interactive Whiteboards and other software. We can also share ideas for integrating ICT into schemes of work.

Training can be delivered at your school/college or another appropriate venue.

Fees: Vary according to individual requirements

CPD courses at a host school or college

Are you interested in hosting an MEI CPD course in your school or college?

They represent cost-effective INSET for the whole mathematics department. We offer a selection of courses, some specific to MEI and others relevant to all specifications. Training can also be tailored to suit your specific needs. You can invite teachers from other schools and colleges to join you on a convenient date and charge them a suitable fee to defray expenses.

Fees (for up to 20 staff attending):

- Lecturer's travel expenses plus:
- £400 for a half-day course
- £500 for a full-day course (or two half-day courses on the same day)
- £1000 for a 2-day course (includes 12 months' access to related web resources and email support)

All course fees are correct at May 2010

For details of how to apply please visit:

www.mei.org.uk/cpd

As a provider of Mathematics Continuing Professional Development, Mathematics in Education and Industry (MEI) has successfully met the quality indicators outlined in the 2009/10 CPD Standard as set out by the National Centre for Excellence in the Teaching of Mathematics

Continuing Professional Development Standard

National Centre for Excellence in the Teaching of Mathematics

