MEI support for mathematics at university

Stephen Lee and Roger Porkess

MEI (Mathematics in Education and Industry) began with a small group of teachers in the early 1960s. Since those early days the organisation has grown into the country’s leading independent mathematics curriculum development body. MEI’s current work is wide-ranging and includes two major programmes that are particularly relevant to universities.

- Teaching Advanced Mathematics (TAM) programme is designed for non-specialists teaching some mathematics. It provides them with subject knowledge and advice on pedagogy so that they can teach up to A Level. This programme is run in conjunction with 4 universities and links in with their masters’ programmes, providing Credit Accumulation and Transfer (CAT) points.

- The Further Mathematics Network is described in more detail below.

Our work with these programmes has led us to develop sources of advice and teaching and learning resources which universities may well find useful.

Developments in Pre-University Mathematics

MEI is at the forefront of developments in 14-19 Mathematics and has a significant voice in the mathematics education community. A number of position/discussion papers on developments and issues in mathematics education can be accessed from the MEI website at: http://www.mei.org.uk/posn_papers.shtml. Such papers should be informative for academics, as well as being of interest to PGCE students and Mathematics Education research students.

Two documents, which give an overview of the pure and applied content of current AS/A level Mathematics and Further Mathematics, will be of interest to those involved with students who have studied mathematics A levels prior to entry. These can be downloaded from: http://smau.mei.org.uk/.

Presentations and seminars

MEI is keen to assist academics at universities by keeping them informed of changes in pre-university mathematics and explaining what can be expected of students entering university with AS/A level qualifications in Mathematics and Further Mathematics. MEI staff have developed a Professional Development presentation and a seminar session, Teaching mathematics and mathematics-based university modules: Knowing your students’ mathematical background, specifically to address these issues.

MEI staff can also offer a range of other lectures on various topics relevant to teaching mathematics, such as the use of Interactive Whiteboards and enrichment ideas in
mathematics. These are adapted from those available to school/college teachers, see http://www.mei.org.uk/files/pdf/t_br_ch_menu.pdf.

National Reports
MEI has created a page, http://www.mei.org.uk/reports.shtml, on its website, where links to reports relevant to mathematics education can be found. Having a single page that lists such reports means that those seeking information about national developments can find it easily.

Further Mathematics Network
Currently over 50 universities engage with the national Further Mathematics Network (FMN), which MEI runs for the DfES. All of the 46 Further Mathematics Centres across England work with their local universities, building strong links with schools/colleges and supporting students and teachers. Many universities host FMN enrichment events and AS/A level revision days, which act as a mechanism for the promotion of mathematics and give thousands of students the opportunity to visit their local university, e.g. over 4500 students attended revision days at universities across the country in May/June 2007. For more info go to: http://www.fmnetwork.org.uk/revision.php.

Online Resources
MEI has developed very extensive online learning and teaching resources to support AS/A level Mathematics and Further Mathematics, and in doing so has gained experience and expertise in producing effective web-based materials. For more info goto: http://resources.mei.org.uk/. Over 1100 schools and colleges across the country access the resources and over 1000 Further Mathematics students use them as part of their studies with the FMN. MEI is already working with the University of Warwick and the University of the West of England to enable these resources to be used to support undergraduates on mathematics-related degrees such as Engineering. We welcome the opportunity to work with other universities and in areas such as mathematics and economics. For more info goto: http://smau.mei.org.uk/.

For further information, contact:
Stephen Lee at stephen.lee@mei.org.uk
Supporting Mathematics at University Coordinator
Mathematics in Education and Industry

Editorial Comment
The work of the Maths, Stats & OR Network aligns very closely with that of MEI. Supporting mathematics at university is one area of common interest and MEI and the Maths, Stats & OR Network look forward to working with the wider mathematics, statistics and operational research academic community on further developments. For more info goto: http://smau.mei.org.uk/