

Understanding the UK Mathematics Curriculum pre-University

A Guide for Academic Members of Staff

In order to study a wide range of undergraduate programmes, including those in the Biological Sciences, Chemistry, Computer Science, Engineering, Materials Science, Mathematics, and Physics students need to have gained a mathematics qualification prior to entering university. This qualification may have to be at GCSE, AS or A level (in maths or further maths), or ordinary or higher level Scottish leaving certificate or equivalent. A vast array of pre-university mathematics qualifications exist within the UK, and for those working within the Higher Education sector, it is not always clear what mathematics content, methods and processes students will have studied or indeed can be expected to know and understand as they commence their university programmes.

The Maths, Stats & OR Network, in conjunction with the Subject Centres for Bioscience, Engineering, Information and Computer Sciences, Materials and Physical Sciences are seeking to commission a concise guide, written for those within the Higher Education sector, that seeks to outline what students with given prior qualifications in mathematics are likely to know and be able to do. The guide should address not only the factual knowledge that has been covered, but also the degree to which skills will have been retained, the sorts of learning and assessment approaches students have become used to and their motivations and attitudes.

The guide should be written in a suitable style so as to provide advice and guidance to colleagues within the following disciplines: mathematics, the biological sciences, information and computer science, engineering and materials science, physics and chemistry. It should cover both GCSE and A-level, along with other appropriate qualifications that students may have studied, and where possible, it should make reference to the new 14-19 diplomas. It should also advise on any additional sources of information that those within the higher education sector might utilise to familiarise themselves with the backgrounds of incoming undergraduate students, particularly as the pre-university mathematics curriculum is currently undergoing a period of considerable change.

A fee of up to £1,500 will be made available for the production of this guide. The Maths, Stats & OR Network will undertake the design and layout of this guide on behalf of the Subject Centres. It is intended that the guide will be published by the 1 September 2009.

Those wishing to undertake this work are asked to submit a brief expression of interest detailing their suitability for undertaking this work and costs to Michael Grove (M.J.Grove@bham.ac.uk) by 1 March 2009. Disciplinary experts will be available from each of the Subject Centres to provide advice and guidance during its creation.