

The Council for the Mathematical Sciences

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Responsibility for funding of Masters courses in STEM subjects

The Council for Mathematical Sciences (CMS) would like to suggest "Responsibility for Funding of Masters Courses in STEM subjects" as a topic for an evidence session of the Innovation, Universities, Science and Skills Committee.

Overview

Undergraduate study is subsidised by DIUS and responsibility in this area is well understood. It is also accepted that the Research Councils are responsible for securing the future supply of researchers by supporting doctoral training.

However, this system has left a 'grey area' in responsibility for funding Masters courses which has left many such courses in STEM subjects in a precarious position for some time. The Engineering and Physical Sciences Research Council is now withdrawing further from funding Masters courses and this is due to have a significant impact in the next academic year.

It is very damaging that no single body is prepared to accept true responsibility for funding the 'second cycle' described by the Bologna process, and the issue has been raised by the CMS and other colleagues across STEM on several occasions. The creation of the Department for Innovation, Universities and Skills brings responsibility for funding for all university-based study under one roof and represents an opportunity for funding gaps to be joined up properly for the first time.

The CMS believes that the lack of clarity of responsibility for funding leads to a significant threat to the supply of trained Scientists, Engineers and Mathematicians into UK business and industry. Scrutiny from the Committee would help to resolve the issue of funding responsibility and thus ensure continuity of supply.

The importance of Masters training

Masters training is of great importance in training students in advanced areas of STEM subjects. In our sphere, it is particularly important for Statistics, Operational Research, Industrial Applied Mathematics and Financial Mathematics. To take just one example, a Masters degree in Statistics is a necessary qualification for most Statistician positions in Research and Development, where flexibility and a broad range of skills are required. There are very few UK first degree programmes which contain a sufficiently large statistical component to equip graduates to become professional statisticians without further study. Similarly OR Masters courses provide in depth training in OR which is not widely available at undergraduate level and include a practical project in industry, thus equipping students with vital skills for industrial problem solving. The importance of Masters training in the STEM subjects was directly acknowledged by the CBI in its submission to the Chancellor leading up to the 2009 budget¹.

Masters courses attract the very best graduates, many of whom often have alternative job offers, into careers as technical experts in areas which underpin the UK economy. Without

¹ Available from
<http://www.cbi.org.uk/ndbs/press.nsf/38e2a44440c22db6802567300067301b/06bb53c3f423bcae8025757e003c371e?OpenDocument>

proper long-term funding many university courses will be cancelled and others will be filled with overseas students who generally return home after graduation – there is now a real danger of irreversible damage to the UK's capacity to produce expert Scientists, Engineers and Mathematicians for employment in industry, government and commerce.

Recent developments in support for Masters training through EPSRC

Up to and including the current academic year (2008-09) the Engineering and Physical Sciences Research Council (EPSRC) has run a scheme of Collaborative Training Accounts (CTA). CTA funding has been used, particularly within the Mathematical Sciences but also across STEM subjects more generally, to fund studentships to allow students to undertake advanced, Masters, courses in areas of critical importance to the UK economy. EPSRC has now withdrawn the CTA scheme. Its replacement, Knowledge Transfer Accounts (KTA), is restricted to transferring knowledge arising directly from EPSRC-funded research. As a result, an important mechanism for funding students to undertake more generic, but economically important, programmes of study has disappeared.

Suggested witnesses

Lord Rees of Ludlow (President, Royal Society)
Philip Greenish (Chief Executive, Royal Academy of Engineering)
Richard Lambert (Director General, CBI)
Karen Dunnell (National Statistician)

Ian Diamond (Chair, RCUK)
David Delpy (Chief Executive, EPSRC)
Adrian Smith (Director General, Science and Research, DIUS)
Sir Alan Langlands (Chief Executive, HEFCE)

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