



President's Report

**Professor Helen Atkinson FREng
President, EPC**

After the EPC's annual Congress in April, we gave considerable attention to crafting a letter to Sir Alan Langlands (Chief Executive of HEFCE), highlighting what we saw as the risks to engineering in the new fees regime (see *Professional Engineering*



July 2011 for a summary of our views - <http://profeng.com/columns/engineering-courses-could-face-the-axe>). We worry about students being deterred from taking the MEng by the additional levels of debt, and BEng graduates not taking MSc courses, again because of the additional year of debt (and for the MSc under commercial rather student loan conditions).

However, this is the fees regime for England. Northern Ireland, Scotland and Wales are all developing their own fee regimes. The Engineering Professors' Council represents engineering in HE throughout the UK and therefore it is imperative for the committee to

Reserve the date – EPC Congress 2012

**Next year's Congress will be held at the
University of Leicester
on 17th-18th April 2012**

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put its mind to understanding the situation in all four nations. In August, I visited Northern Ireland to talk as EPC President on "Engineering Sustainability for the Global Economy" at the International Conference on Engineering Education being hosted by the University of Ulster. This gave me the opportunity to discuss the Northern Ireland situation with the VCs of both Queen's University, Belfast and the University of Ulster, and with representatives of engineering from both universities. At that stage, Northern Ireland was fixing fees for NI students at £3,375, but also cutting funding to the two universities from the public purse, thus really threatening the quality of courses such as engineering which are expensive to teach. As a consequence of these conversations, the EPC wrote to the Minister for HE in Northern Ireland to add our voice to those expressing concern about the situation. The Northern Ireland Executive has since announced £40M in funding to the two Universities, but still with an

EPC Congress 2012

The 2012 EPC Congress will take place at Leicester University on 17/18 April.

Themes will include the REF, SIVS, employability of graduate engineers and the new funding regime.

The Distinguished Guest Lecture will be given by Professor Julia King CBE, Vice Chancellor of Aston University, and followed by the Congress Dinner at the Belmont Hotel, on the evening of 17th April.

The cost for the two days is £245 (including the Congress Dinner) if booked before 1st March and £290 if booked after the 1st March 2012.

To register please contact Mrs Anita Noray on an159@le.ac.uk (Tel: 0116 2522539).

For those who would like overnight accommodation, rooms have been reserved at the Belmont Hotel <http://www.belmonthotel.co.uk/> (which is in one of the most attractive and historic parts of Leicester and 10 minutes walk from the University) at a preferential rate of £84 B&B per night provided the room is booked before the 1st March. Please quote the code ED1604 when booking, which should be done directly through the hotel. Interestingly, if you booked the room now through the Hotel website you could get it for £69!

expectation of very significant “efficiency savings”.

In September, at its annual ‘retreat’ in Cardiff, the Committee turned its attention to Wales. The Welsh government is fixing the maximum fee payable in Wales by Welsh students at £3,465, but has also agreed to support Welsh students studying in England by paying as a grant the difference between the Welsh and the English fees. Under the current fees regime, 25,000 students flow into Wales from England and 15,000 out. Welsh universities therefore face particular challenges with predicting what will happen with these flows under the new regime.

We also heard a report from Scotland about the Scottish situation and we await the outcome of the legal challenge to Scotland (over the fact that a student from elsewhere in the EU can study in Scotland for the same fee as a Scottish student, i.e. free, but an English student must pay £9k).

The Governments’ announcement about AAB+ and extra places under the “core/margin” approach was announced after we had written to HEFCE in May. It is our view that the AAB+ policy does hold risk for engineering in that there is evidence that Maths/Physics are “grades harder” than other ‘A’ levels (cf the report, commissioned by the IoP and the Royal Society, at <http://www.cemcentre.org/attachments/SCORE2008report.pdf>) and therefore it is harder to attain AAB+. In addition, as all institutions have been asked to slice their numbers by 8% to provide the extra places for the “core/margin” there is a danger that, as engineering is relatively expensive to teach, it will be targeted for slicing.

In amongst all the uncertainties, we know that employers are crying out for good engineers and that non-STEM employers value STEM graduates for their “logical approach to solving problems”. We would therefore strongly refute the line taken in Emma Smith’s report presented to the British Educational Research Association’s annual conference in September (cf <http://www.bera.ac.uk/files/2011/09/science1.pdf>), which argued that, since under 50% of engineering graduates were employed in engineering jobs at the 2009 HESA census date,

we shouldn't be spending public money on educating engineers. Longitudinal surveys show that this figure increases very significantly within a couple of years of graduation – and in any case we need people with an engineering education throughout society (particularly in parliament!).

I will add (tongue in cheek) that I didn't know, until I read Stephen Fry's 'Chronicles' recently, that Rowan Atkinson, the comedian, studied Electrical Engineering at Newcastle University before he went on to Oxford.

EPC Committee Retreat 2011

Dr Rob Best, EPC Committee

The annual Retreat of the EPC Committee took place this year at Cardiff University, kindly hosted by the School of Engineering. The EPC President, Prof Helen Atkinson, set a key objective of the meeting to be to learn more about the present state of higher education in the four UK nations, particularly what was happening with respect to the 2012 changes to university funding. EPC represents Engineering Higher Education in the whole of the UK and, whereas formerly this was quite straightforward, devolution of power from Westminster to Wales, Northern Ireland and Scotland has led to increasing divergence in educational policy.

The first morning was spent on standard committee business, particularly reports from the President (as above), Treasurer (the finances remain in good shape!) and the standing EPC Working Groups (Admissions, Mathematics, International and Future Engineering Degrees – all functioning well and providing up to date information and activities in their specific areas). The committee was pleased to welcome Dr Simon Steiner who is the new Discipline Lead for Engineering at the Higher Education Academy, following the reform of the Subject Centre system.

In the afternoon, we had a series of presentations on HE in Wales. Our first speaker was Phil Gummatt, Chief Executive of the Higher Education Funding Council for Wales (HEFCW), We then heard from Prof Hywel Thomas, Cardiff's Pro Vice Chancellor for Engagement and International, and from Prof Karen Holford, Director of the School of Engineering. After dinner in Aberdare Hall, our principal speaker was Jeff Cuthbert, Deputy Minister for Skills



Phil Gummatt, Chief Executive of the Higher Education Funding Council for Wales, in discussion with the EPC Committee

(covering a very wide portfolio, including many areas of interest to EPC). Taken together, our guest speakers conveyed an impressive sense of joined up communication between the Welsh government, HEFCW and the university sector, with a clear intent for integration of regional policy and strategy for the HE sector. Despite the open dialogue taking place, there are clearly difficult issues to be confronted, such as the restructuring of HE provision to align its distribution within the region more closely to the population. A further acknowledged issue is ensuring that the variety of pathways into HE is maintained so that the many areas of social and economic deprivation continue to have opportunities to achieve according to their capabilities. To this end, a review of 14-19 year-old provision is shortly to be undertaken with the involvement of Welsh engineering HE.

On the second day of the retreat, the committee was given a tour of the University's Lightning Laboratory, where leading-edge work is under way to investigate the effect of lightning strikes on the carbon fibre-based composites used in the manufacture of modern aircraft. The experiments are designed to replicate the effects of the most extreme and complex type of lightning ever experienced, involving multiple

strikes of up to 250,000 amps at a time. Besides the intrinsic interest of such extreme conditions, the laboratory itself was an interesting engineering design case study in its own right, having to take into account high voltage and capacitance safety, specialist air quality and insulation against extremely loud bangs. Staff were a little concerned that the perpetrators of a recent burglary may not have appreciated quite how close they had been to being instantly fried!

We also enjoyed a tour of the University's engineering laboratories, where we were shown fascinating work on self-healing concrete; an impressive 1:25 scale working model of the Severn Estuary and adjacent river system to investigate the effect of the proposed Severn Barrier; and a demonstration of the School's large-scale electrical Power Distribution Control System, used for teaching and research at all levels. Coffee with staff gave a further opportunity to learn about the issues faced by HE in Wales, though the primary concern is in

common with the rest of the UK, namely how to attract and retain high calibre staff.

The retreat was rounded off with further committee business. Much of the discussion was around the continuing uncertainty over the new funding system. There are particular concerns for engineering over the consequences of the "AAB" factor, and its implications for university strategy and for the achievements of engineering in widening participation (notably, several of the professors on the Committee would not have made the grade!). Further concerns centre on the special premium for engineering, the funding of MSc programmes and the financial burden on students posed by 4-year MEng programmes. Plans for the 2012 Annual Congress at Leicester (17th to 18th April) are well advanced, with many of the principal speakers booked and cheap accommodation reserved for bookings before 1st March 2012. The Congress will include an update on the status of engineering Higher Education in the four UK nations.

Engineering at the re-structured Higher Education Academy

Dr Simon Steiner was appointed Discipline Lead (Engineering) with the Higher Education Academy (HEA) at York on 1 August 2011. He was invited to join the EPC Committee as an Observer and attended the Committee retreat at Cardiff in September where he presented on his new role, suggesting ways in which EPC members might engage with him in his new role.

Background

Simon was formerly Academic Advisor with the Engineering Subject Centre based at Loughborough and was part of the original HEA since 2004. The significant work of the subject centre (SC) network was brought to York when the HEA was re-structured in 2010/11, with transition funding awarded to several SCs for them to facilitate selected activities during 2011/12.

Both Engineering at Loughborough and Materials at Liverpool were awarded transition funding until April 2012, and Simon is liaising with them on their activities. Engineering and Materials are maintaining links with their communities via their websites through the HEA's Disciplines webpage – see <http://www.heacademy.ac.uk/disciplines> - and direct e-mailings of bulletins, and via workshops for demonstrators/postgraduate teaching assistants and for those new to lecturing. Each is organising its own events including conferences, and Engineering continues to publish the journal, *Engineering Education*.

The new Academy

The HEA's new structure for delivery of its services is under three headings – academic practice development, teacher excellence, and institutional strategy and change – see <http://www.heacademy.ac.uk/services>. There are four Heads within academic practice development, each covering a cluster of

disciplines – STEM, Health Sciences, Social Sciences, and Arts and Humanities; the Head of STEM is Dr Janet De Wilde. Each discipline has a Discipline Lead (eight in total), with four Academic Development Officers who are responsible for the STEM cluster's cross-discipline activities.

The role of Discipline Lead (Engineering)

The scope of Simon's role is defined by the 16 JACS codes covering engineering and materials, where he provides the interface between the HEA and staff working in their provision of HE teaching in engineering departments at UK HEIs, and with HE providers at further education colleges and other institutions across the UK. Simon's work involves developing relationships with academic departments and other organisations relevant to the HE-taught provision in engineering and materials. He leads and manages the delivery of this academic service both with the Academic Development Officers and through Academic Associates, appointed by the HEA to undertake specifically-commissioned areas of work – see

<http://www.heacademy.ac.uk/academic-associates>.

In the future, the engineering discipline at the HEA will provide events such as workshops and seminars from the call recently sent out to the HE community – see

<http://www.heacademy.ac.uk/seminar-series>.

This invites bids under thematic and discipline headings. It is expected that new resources will be commissioned on topics from the HEA's seven priority themes.

New Sectoral Group

The exploratory meeting planned for establishing a new sectoral group for bio-medical engineering, announced in the last newsletter, has had to be postponed until 25th January. It will be held in central London.

If you would like to register your interest, please email V.Elston@epc.ac.uk.

Each Discipline Lead will support the formation of Special Interest Groups in relevant topics and will provide support to award holders in the discipline - from National Teaching Fellows (NTFs) – see <http://www.heacademy.ac.uk/ntfs>, to teaching development grant (TDG) holders – see <http://www.heacademy.ac.uk/teaching-development-grants>.

There will continue to be opportunities for the publication of pedagogic research - through a discipline-based journal, at the planned annual STEM conference to be facilitated by the STEM cluster (April 2012), and at the HEA's own annual conference (July 2012).

Simon would also like to encourage departments in engineering and in materials to contact him regarding issues arising from their NSS results, offering them a programme of support to look at issues under a department change programme. This is in addition to the cross-STEM provision of workshops for those new to lecturing and for demonstrator (PGTA) staff in HE, and for HEA events.

Working with the Discipline Lead

The success of these activities depends primarily upon two factors: for EPC members to engage with their departments in responding to the calls and other initiatives, and by nominating appointees as Academic Associates to assist with this.

Simon would be pleased to hear from you and can be contacted by email: simon.steiner@heacademy.ac.uk or by phone: 07920-273407.

Consultations

The EPC aims to respond whenever possible to all relevant public consultations, notably from the government, parliamentary committees, national bodies including HEFCE, and the European Commission. The Committee particularly values the input of members to ensure that our responses are properly representative of our membership, and would like to thank all those who have responded to our recent requests for views. We aim to ensure that our requests for input are always as concise and user-friendly as possible.

We have submitted responses recently, among others, to

- the HE White Paper, and the specific consultations flowing from it, including aspects of the proposed regulatory framework and early repayment;
- HEFCE's consultations on funding allocation and the REF; and
- the European Commission consultation on the EU Common Strategic Framework for Research and Innovation.

Copies of all of our responses are available from pbaker@epc.ac.uk.

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