

Register News



Engineering Council UK

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WELCOME



Register News brings you the latest developments in engineer and technician registration, plus coverage of the wider activities of the Engineering Council UK (ECUK), both at home and internationally. It also contains news and views on more general issues that are likely to be of interest to registrants, educators and institution staff.

This latest issue reports on the impending launch of the first professional qualification for ICT

technicians, unveils the final recommendations of the IEng Review working group and explains how ECUK may be able to help halt the decline in good-quality company training schemes. Highlights of the latest mentoring workshop and a look at the first guidelines on further learning are among other items featured, and there is news too of a planned statement of principles on sustainability. Internationally, the focus is on the IEA conference, where ECUK did sterling work defending its registrants' interests.

Andrew Ramsay, CEO, Engineering Council UK

ECUK TO LAUNCH ICT TECHNICIAN REGISTER

There is currently no professional qualification for the growing number of technicians who work in the key fields of IT and communication systems. The Engineering Council UK (ECUK) has announced its intention to rectify this omission by offering such individuals the opportunity to apply for registration as Information and Communications Technology Technicians. Those meeting the competence requirements for entry onto the new register will be granted the post-nominal title *ICTTech*.

The Institution of Engineering and Technology (IET) has been at the forefront of developing the *ICTTech* award, which will initially be offered through a small group of engineering institutions licensed by ECUK. Assessment of the first applicants should begin by the end of this year, with a view to the *ICTTech* register going live at the beginning of 2009.

Research carried out by IET and discussions with ICT sector bodies and employers, notably the armed forces, revealed solid support for the proposed new award, which has the potential to help embed professional standards in the sector. ICT technicians are to be found in a wide range of industries and the pool from which registrants will be drawn is estimated to number at least 150,000.

A competence-based *ICTTech* standard has been drafted in consultation with various interested parties, including the sector skills council e-Skills UK. It follows the same basic format as the ECUK standard (UK-SPEC) which is used to assess those who wish to register as Engineering Technicians (EngTech).

Before ECUK can invite candidates to apply for the *ICTTech* title, it must first finalise the standard and award licences to the initial group of institutions who wish to make it available to their membership. It will also be necessary for the Privy Council to approve amendments to ECUK's byelaws.

LIFTING AND SHARPENING THE PROFILE OF IENG

While the title Chartered Engineer is a well-established 'brand' that enjoys wide recognition both at home and overseas, it would be difficult to argue the same for the albeit well-respected Incorporated Engineer award. Action to correct this situation is a key recommendation in the second and final report of the IEng Review Working Group set up last year by ECUK. This calls for an all-round effort to market the award more effectively, thereby raising its profile and boosting registrant numbers.

The report – which will shortly be considered by the ECUK Board – also recommends revisions to the UK-SPEC standard to provide clearer guidance on IEng competences and on how underpinning knowledge and understanding can be acquired. A further recommendation is that ECUK and its licensed institutions should work with employers, educational institutions and sector skills councils to ensure adequate provision of flexible further learning programmes that meet IEng requirements.

In its first report, published last year, the working group proposed that the title Incorporated Engineer should be changed. Various alternatives were suggested but after considering the views of the institutions – and polling some 6000 IEng registrants – the group has now decided it would be best to stick with the existing name, at least for the time being. It has though advised that the issue be looked at again if IEng numbers have not picked up in two years' time.

The first question considered by the review was whether there was actually still a place for IEng, given the significant decline in new registrations over the previous ten years. The group quickly concluded that there was – and that the exemplifying academic qualification should continue to be an accredited ordinary degree. However it did propose a re-positioning of IEng so it would no longer be seen in isolation from the other awards but rather as part of a professional development pathway, which for many will lead to CEng registration. Subsequent consultation with industry and institutions lent support to the above recommendations.

During the second phase of the review, the working group's deliberations included a re-examination of UK-SPEC. Aware that the wording of the standard's competence statements were the product of considerable thought – and had been well received by the profession and employers – it decided to propose only limited changes. Some are to emphasise the responsibility taken by IEng registrants for day-to-day engineering operations, while the rest are to draw a clearer distinction between Chartered and Incorporated Engineers. The group is also recommending the addition of examples of activities that might demonstrate the acquisition of particular IEng competences.

The group's report goes on to say that – given that non-honours degrees are not widely available – a revised UK-SPEC needs to emphasise the alternative ways of meeting IEng educational requirements, such as foundation degrees or higher nationals plus further learning. It also recommends that consideration be given to including appropriate level 4 NVQs and SVQs as exemplifying qualifications.

It is further proposed that UK-SPEC be re-published as a single document covering all three ECUK awards – viz, CEng, IEng and EngTech. Currently it exists as two publications - CEng/IEng and EngTech. This change would make it easier to present the awards as elements of a progressive model, while still emphasising the individual value of each of them.

On the subject of promoting IEng, the report expresses the group's belief that ECUK's registration marketing programme must put appropriate effort into all three registrant categories. In addition, it points up the need for the institutions to play their part by developing promotional material for IEng membership and ensuring that their offering for this category is suitable and attractive.

The final report of the IEng Review Working Group will be considered by the ECUK Board at its next meeting, on September 4th. It will also be given the full results of an on-going survey of employers' views.

MORE ON FURTHER LEARNING

What counts as further learning, how long should it take and how is it distinct from initial professional development? These are a few of the questions addressed in a guidance note on the subject that ECUK has produced for its licensed engineering institutions.

In the UK Standard for Professional Engineering Competence (UK-SPEC), further learning is a way by which candidates for Chartered or Incorporated Engineer registration may demonstrate they have the necessary knowledge and understanding if they do not possess the full exemplifying academic qualifications. This means learning to master's level in the case of CEng, or to bachelor's degree level for IEng.

When the standard was published four years ago, ECUK chose not draw up rigid rules on further learning. The institutions were left to develop their own approaches, this being consistent with the concept of flexible learning pathways. With a number of general principles having subsequently emerged, it became apparent that the time was now right for a first set of guidelines that institutions could use as the basis for their own advice to employers and would-be registrants.

The contents of the new ECUK guidance note relate primarily to applicants for registration by the standard route, though some of the principles may apply to individual route candidates. The document explains that further learning may comprise formally taught elements, individual private study, work-based activity or a combination of these. It may or may not lead to a formal academic award, but in all cases it must be subject to rigorous independent assessment.

Having defined what further learning is and how it should be achieved, the document uses a question and answer approach to clarify possible causes of confusion, such as whether it is necessary to be prescriptive about the balance of technical and non-technical content and what sort of skills are needed by assessors.

The guidance note has been published on the ECUK extranet.

THE IMPORTANCE OF BEING MENTORED

Are some engineers failing in their quest to become registered because they do not have access to a mentor? There is evidence to suggest that this is in fact the case and that candidates who are mentored are more likely to be successful at their professional review interview than those who are not. At ECUK's latest workshop on mentoring it became clear that this is an area where there needs to be more inter-institution sharing, both of good practice and resources.

Held in June, the one-day workshop provided an opportunity for staff and members from ten institutions to discuss all the key aspects of the subject. Topics covered included the role, selection and training of mentors and the rewards of becoming one, the benefits of keeping this an unpaid, voluntary role and the pros and cons – largely cons – of remote mentoring. Examples of good practice were provided in presentations from the Institution of Chemical Engineers (IChemE) and the Institution of Gas Engineers & Managers (IGEM).

Mentoring is all but essential for candidates for registration who lack the right academic qualifications and are applying using the technical report option. However, it is generally accepted that any young would-be registrant is likely to benefit from the wide-ranging support and guidance that a mentor is able to offer. The workshop did though reveal a distinct absence of unanimity over whether mentors should be found by the institutions or by applicants themselves. Perhaps not surprisingly it was the smaller institutions that favoured the latter approach.

Some institutions have proved very successful at matching mentors to 'mentees' and there is definite scope here for other institutions to make use of such services. Promisingly, both the Institution of Engineering and Technology (IET) and the Institute of Physics (IOP) already hold workshops for mentors that are open to those from other institutions. Hopefully this might lead to a wider collaboration between professional bodies, one that would also extend to locating suitable mentors for those who struggle to find one. Indeed, the development of a profession-wide mentoring 'matchmaking' service could well give a significant boost to registrant numbers. It would be particularly valuable to the many engineers working for SMEs, a sector where registration has traditionally had a limited foothold.

A fuller report on the mentoring workshop, plus feedback from attendees, has been posted on the ECUK extranet.

ALLIANCE IN ACCORD

The recent annual meeting of the International Engineering Alliance (IEA) put a lie to the notion that an organisation of its size and global spread would struggle to reach consensus on key issues. Held in Singapore during the final week of June, the event was notable for the progress it made on tackling long-standing anomalies associated with the Washington Accord, the agreed solutions to which exactly align with UK interests.

The IEA comprises the national engineering bodies of over 20 countries, 15 of which – including ECUK - currently hold full membership. It acts as the umbrella organisation for various global accords and engineer registers, the oldest of which is the Washington Accord. The latter was very much the main focus of debate during the Singapore meeting's four days of workshops and discussions.

The Washington Accord provides mutual recognition of the procedures used by signatory nations to accredit engineering degrees. By extension, the degrees themselves are recognised and those who hold them are generally accepted as meeting the academic requirements to practise engineering in other accord countries. For those coming into the UK it makes the process of registering as a Chartered Engineer more straightforward.

But problems have arisen when accord countries have changed their educational requirements, as the UK did in 1997 when it raised the bar for CEng registration from bachelor's to master's degree level, putting it out of step with all its co-signatories. Despite the change, holders of bachelor's degrees coming into the UK from other signatory countries could still legitimately ask for their qualifications to be recognised as meeting the academic basis for gaining chartered status.

Fortunately, action was taken at the Singapore meeting that should bring an end to this anomaly. It was unanimously agreed that all Washington Accord countries will look to follow the path taken by the UK – and more recently by Ireland – and up their academic criteria for recognition as a professional engineer. The first step in this process will be for an IEA working group to prepare a revised set of graduate attributes in time for the Alliance's 2009 meeting.

It is intended that the requirements of all 12 members of the accord will be at or close to master's standard within the next few years. Moreover, it was generally accepted that even before this happens, those like the UK that have already increased their standards would be free to limit the extent of recognition granted to a qualification that fell below their national benchmarks.

Significantly, there was also a strong desire among delegates to try and achieve compatibility between the Washington Accord and the recently developed European Commission backed EUR-ACE degree accreditation framework – effectively producing a global benchmark. This is further good news for the UK, one of only two European countries to enjoy full membership of the Alliance. Under the European system, degree programmes are assessed on the basis of their learning outcomes. It is thus compatible with ECUK's accreditation standard (UK-SPEC) and the QAA benchmark statement for engineering degrees. ECUK has been granted the right to award the EUR-ACE 'label' to qualifying UK degree programmes.

Remarkably, the IEA meeting produced very little disagreement, and what did arise was not over major issues. In fact, the only real note of discord concerned what the group should call itself. Some see International Engineering Alliance as too limiting a title in terms of the group's potential for expansion into areas of technology such as ICT. However, the name was only brought in last year and is undoubtedly an improvement on the confusing 'International Engineering Meeting' that it replaced.

Details of ECUK's international activities and a list of Washington Accord members can be found at:

www.engc.org.uk/international/

NURTURING GOOD QUALITY TRAINING

Hardly a day goes by without someone bemoaning the scarcity of trained engineers. However, much less is said about the decline in the number of companies providing good quality training schemes for their graduate engineer intake. ECUK sees itself playing a key role in addressing this worrying situation, believing it is well placed to nurture a greater commitment to initial professional development (IPD) among engineering employers and to disseminate good practice.

It has particularly high hopes of its recently launched MSc in Professional Engineering, which provides a work-based approach to simultaneously acquiring master's level learning and the competences needed for CEng registration (see **Register News, April 08**). Widespread provision of the new degree – which is an objective of ECUK's 2009-2011 strategic plan - could see many thousands of engineers gaining their IPD in this way. This would go a long way to alleviating shortages of professionally trained engineers.

Crucially, the initiative has met with a very positive reaction from employers. This is not surprising since every individual's learning programme is tailored to the needs of his or her employer and also provides the potential for knowledge transfer with the participating university. Moreover, it allows companies to meet employees' development needs without them having to be away from work for long periods.

ECUK is currently developing a similar programme that will provide further learning and the competences required for IEng registration. Importantly, it has also secured the funding to establish an Initial Professional Development Accreditation Board. The new body would be to IPD what the Engineering Accreditation Board (EAB) is to engineering degrees. Thus it would disseminate good accreditation practice among the engineering institutions that made up its membership and facilitate joint visits to assess company schemes. It is hoped that this would encourage more employers to seek approval of their schemes, as well as raising the standard of IPD provision.

TITLES FOR 'SALE'

In many parts of the world, registration with ECUK is seen as a gold standard of engineering competence. This has unfortunately made it easier for fraudsters to trick engineers in developing countries into handing over large sums of money in exchange for a promise that they will then become registrants.

The scam is part of a much longer running fraud involving offers for non-existent jobs in the oil and gas industry. These come from individuals styling themselves as recruitment agents or posing as employees of companies such as Shell and Total. It appears that they mainly target engineers in south and south-east Asia, asking them for money up front to arrange work permits, insurance and other documentation.

Recently the fraudsters have been telling their intended victims that employment depends on them being 'accredited by' and/or registered with ECUK, in one case claiming that the fee for this would be over £2000. Normally their demands are more modest, their usual 'rate' for Chartered Engineer status being around the £1000 mark – though for the individuals being targeted this is still a considerable amount.

Luckily, some have contacted ECUK before handing over any money. The appalling standard of spelling, grammar and syntax in emails sent by the conmen, as well as the faintly ludicrous pseudonyms they sometimes use – which have included such names as Roy Keane and Michael Owen - have often been enough to alert recipients that something is amiss, even though English is not their native tongue.

The fraudsters have been clever though when it comes to covering their tracks, constantly changing the names that they operate under, using fictitious addresses and conducting most correspondence by email – even carrying out 'interviews' online. They also use methods that make it difficult if not impossible to trace the destination of payments. Moreover, owing to the international nature of the fraud it does not fall within the jurisdiction of Trading Standards.

However, ECUK does remain hopeful that it will prove possible to track down and prosecute the culprits. It has already been able to limit the numbers falling prey to them – which thankfully are still not great – by alerting the national engineering organisations in those regions affected by the scam, which have then been able to inform their members. There are also prominent warnings elsewhere – including the Shell and ECUK websites*.

Of course it takes only a few minutes studying the registration section of the ECUK website to realise that becoming a Chartered Engineer, Incorporated Engineer or Engineering Technician involves much more than just filling in a short form and paying a fee. To gain these titles it takes knowledge, skill and experience, not to mention hard work and commitment – all of which must first be assessed by the licensed engineering institution of which the applicant is a member.

* www.shell.com/home/content/careers/recruitment_fraud/recruitment_fraud.html

* www.engc.org.uk/help_and_info/registration_fraud.aspx

BACK TO BASELINE

In 2006, ECUK embarked on a survey of employers to establish the continued relevance to them of the competences called for by UK-SPEC - the UK Standard for Professional Engineering Competence – and to determine whether there was a need for additional skills not included in the standard. It also sought to discover how well professional engineers and technicians measured up in terms of these competences. Next year it will repeat the exercise to see whether anything has changed.

The original 2006/07 baseline survey, which involved interviews with 830 employers from a range of sectors, found that UK-SPEC did largely reflect employer needs. Only a small percentage suggested the inclusion of additional competences (IT skills being the most frequently mentioned, though only by 7% of the sample).

Though registered engineers and technicians showed weaknesses in some areas, they generally out-performed their non-registered counterparts, this being particularly so at CEng level. Moreover, it was noticeable that organisations with registered staff tended to impose higher standards than those without them. ECUK is hopeful that the 2009 survey will show further improvements in competence levels (which would reflect the institutions' growing experience of working with UK-SPEC).

The first survey can be found on the ECUK website:

www.engc.org.uk/documents/UK-SPEC%20Baseline%20Project.pdf

LEADING EMPLOYERS BACK REGISTRATION

BAE Systems and Network Rail, two of the UK's biggest employers of engineers and technicians, have publicly declared their support for professional registration. They did so in evidence given to the ongoing inquiry into engineering being conducted by the House of Commons IUS Select Committee.

Written evidence has been submitted to the committee by 68 organisations and individuals, the former including professional bodies, universities and major employers. The Engineering Council UK (ECUK) contributed to a joint response made by the engineering community, as well as making its own submission. Its CEO Andrew Ramsay was also among those called to give evidence to the committee in person, as were the CEO of Network Rail and the Project Director of BAE Systems.

BAE Systems has 100,000 employees worldwide, of whom 18,000 are British engineers. It believes that one of the keys to recruiting and retaining the very best individuals is by offering continuing vocational development, to which end it puts over 200 engineering graduates a year through its structured training programme. Moreover, it runs the UK's largest apprenticeship programme. Gratifyingly, the company told the inquiry that registration could make "a major contribution to raising the standards of the profession and encouraging relevant CPD". It also described registered engineers and technicians as "a national asset in terms of capability".

Network Rail has also invested heavily in vocational training. It too operates a graduate training scheme and an advanced apprenticeship programme, which will turn out over 1000 skilled technicians. It is also one of the first three companies to be approved by QCA to award work-based qualifications. Appearing before the select committee, Network Rail's CEO Ian Coucher talked of the importance of professionalism and standards, specifically mentioning the value of gaining Chartered Engineer status.

During his stint before the committee, Andrew Ramsay called for statutory recognition of the Chartered Engineer, Incorporated Engineer and Engineering Technician titles. He argued that it would demonstrate government's support for registration, as well as making it much easier to deter misuse of title.

ECUK's CEO did however make it clear that he was not advocating government regulation of the engineering profession. Nor was he proposing that registration be made mandatory for everyone wishing to work as an engineer, which he believed would not be acceptable to employers – who would regard it as anti-competitive. He cited the example of Canada, where it is compulsory for engineers to be licensed by government. This has created problems for the country in its efforts to recruit from abroad to meet serious skills shortages.

Mr Ramsay also commented that legal protection of the title 'engineer', which many have called for, would prove very difficult. In contrast, statutory recognition of the three registered titles would be simple to achieve and could do much to lift the status of engineering professionals.

In the latest phase of the inquiry, ECUK is among those who have been asked for their input for a case study on engineering in government. This will consider such matters as the role and effectiveness of the Government Office for Science and the Chief Scientific Advisers in providing engineering advice across government. What the profession is doing to promote engineering and give advice to government will come under the spotlight too, as will the status of engineers and engineering within the civil service. Examples of what happens in other countries are also being sought; with its extensive international connections ECUK is well placed to help provide such information.

The written evidence already submitted by ECUK to the House of Commons IUS Select Committee's inquiry can be found at www.engc.org.uk/publications, as can the engineering community's joint contribution.

HIGH PRINCIPLES

One of the more popular publications produced by the old Engineering Council – before it was split to create ECUK and ETB – was the 1994 code of practice 'Engineers and the Environment'. With this now out-of-date and out-of-print, but still regularly requested, ECUK has set up a working group to create a suitable replacement that is in-tune with current thinking and concerns. It will take the form of a statement of principles on sustainable development.

When it was introduced by ECUK in 2004, the UK Standard for Professional Engineering Competence (UK-SPEC) was notable for its inclusion of specific references to sustainability. It is intended that the proposed new guidelines will flesh out these references and have relevance across the profession. A further aim is to raise public awareness of the role played by engineers in achieving sustainable development.

It has been agreed that the publication will encompass economic, social and environmental considerations and be 'high-level' and generic, leaving the individual engineering institutions to produce material that is discipline-specific.

All 36 of ECUK's licensed engineering institutions have been asked about their position on sustainability and any material they have published on the subject. Six of them are represented on the working group, as are the Royal Academy of Engineering and Forum for the Future. The group aims to consult with a range of external bodies, including government departments.

ADDING A GLOBAL DIMENSION

Engineering has a uniquely important role to play in addressing the global challenges of environmental sustainability, international poverty reduction and economic growth. How global 'skills' can be incorporated into higher education engineering programmes is the subject of 'The Global Engineer', a new 32-page publication produced by Engineers Against Poverty and the Development Education Research Centre at the Institute of Education of the University of London.

The document points out that, while there are strong drivers for including a global perspective in engineering courses, there is little space within the curriculum for additional material and academics are understandably opposed to sacrificing 'core' engineering content. Some of the approaches currently being applied by UK universities are presented and an attempt made to draw out wider lessons.

Using practical examples the publication demonstrates how embedding a global dimension can help deliver against a range of the learning outcomes that are required for course accreditation under the ECUK standard UK-SPEC. It also seeks to show that the necessary reforms to the curriculum are not only achievable but in the long-term interests of UK universities, students and employers.

'The Global Engineer' is available at:

www.engineersagainstpoverity.org/docs/WEBGlobalEngineer_forLinks_rgb_3.pdf.

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