



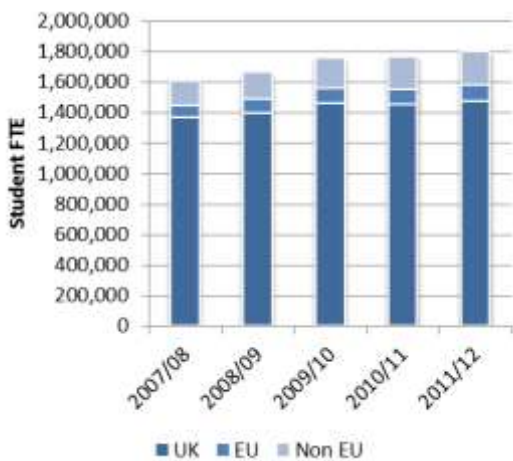
**The issue**

In 2012, the Engineering Professors' Council joined with the President of the Royal Academy of Engineering, Sir John Parker, in welcoming the Chancellor's move towards a modern industrial strategy, signalled in the Autumn Statement. Currently the UK produces only 46,000 engineering graduates each year; an Engineering UK report<sup>1</sup> published recently found that this number needs to be doubled if the near term projected demand for graduate engineers is to be met. It is therefore critical to the success of this emerging industrial strategy that the demand from applicants for UK university engineering programmes and the onward progression to postgraduate study and professional or high academic status is maintained; indeed increased.

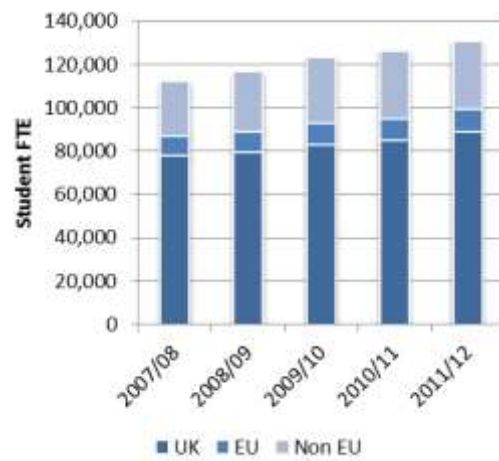
Producing engineering graduates of the standard and in the numbers required by industry is an expensive business. The current maximum chargeable undergraduate tuition fee for UK and EU students attending HEIs in England and Wales does not in all circumstances meet the cost of delivery and so we welcome the continued financial support of the Strategic and Vulnerable Subjects (SIVS) premium within our teaching grant as an essential contribution to this. However, employers expect engineering graduates to be well trained in the use of the latest equipment, software and techniques. And world-class researchers need such equipment if they are to continue to discover new techniques and innovative products and processes. This requires university engineering departments to generate sufficient surpluses over the basic cost of programme delivery to maintain such investment. In order to do this, engineering departments have been hugely entrepreneurial in a range of ways from collaborating with business in sharing equipment to attracting more students from overseas.

**The stats**

**Proportion of non EU students in engineering compared with all other disciplines**



**All students (excl. engineering and technology) at UKHEIs**



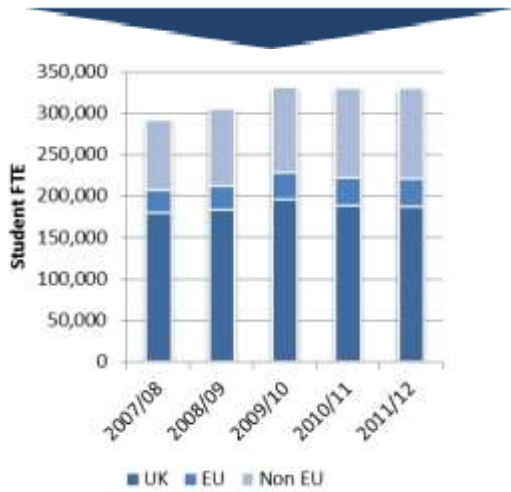
**All engineering and technology students studying at UKHEIs**

Students from outside the European Union ("non EU") represent around 12% of all students studying disciplines other than engineering and technology.

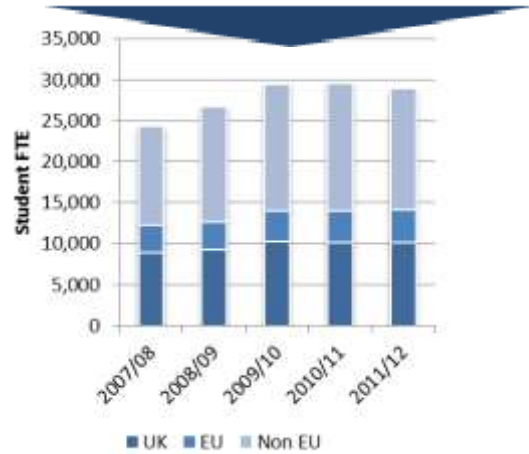
For engineering and technology students studying at UK HEIs, the comparable proportion is 24%.

For postgraduate students, the proportion of non EU students is around one third for non engineering students...

<sup>1</sup> [http://www.engineeringuk.com/View/?con\\_id=360](http://www.engineeringuk.com/View/?con_id=360) ...but more than half for engineering and technology students



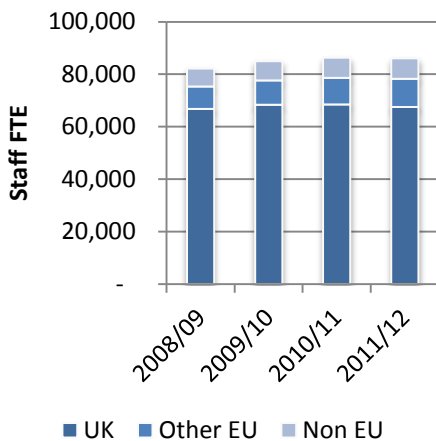
All postgraduate students (excl. engineering and technology) at UK HEIs



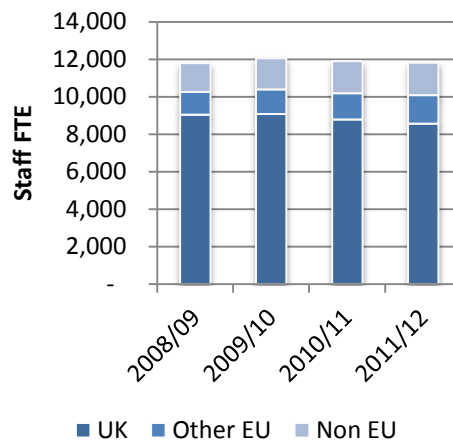
All postgraduate engineering and technology students studying at UKHEIs

Source: Higher Education Information Database for Institutions/ HE students/Full-time equivalent/(Subject area of module/(9 Engineering & technology)/Domicile (basic)

Proportion of non EU staff in engineering compared with all other disciplines



All academic professionals with a permanent or open-ended contract (excl. engineering and technology) at UK HEIs (where nationality known)



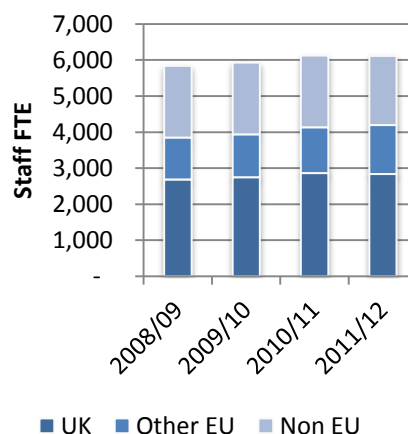
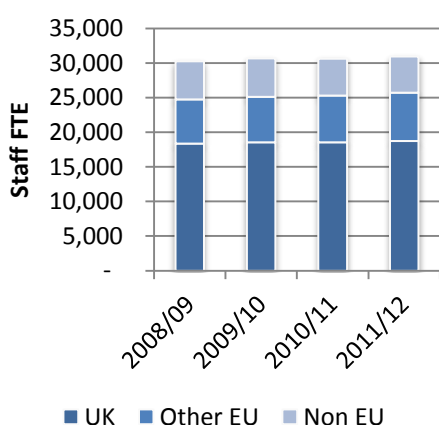
All academic professionals working in engineering and technology with a permanent or open-ended contract (excl. engineering and technology) at UK HEIs (where nationality known)

Academic staff from outside the European union represent around 9% of staff with permanent contracts in the disciplines outside engineering.

For engineering and technology, the proportion of non EU staff increased from 13% to 15% over the period since 2008/09.

For research staff (on any type of contract and including fellowships, short term visiting contracts etc), non EU staff represent around 39% of all such staff (where nationality is known)...

...for engineering and technology, the comparable figure is 54%



**All academic staff with a research contract, permanent or otherwise (excl. engineering and technology) at UK HEIs (where nationality known)**

**All academic staff with a research contract, working in engineering or technology, permanent or otherwise (excl. engineering and technology) at UK HEIs (where nationality known)**

Source: Higher Education Information Database for Institutions/Staff full-time equivalent/All staff/Activity (detailed)/Academic Professional/Terms of employment Open-ended/permanent/ Nationality/Academic employment function/( Cost centre group Engineering & technology)

## The implications

Engineering is a truly global discipline. Primarily, we need the talent from both overseas staff and students to keep both educational programmes and our research vibrant and innovative. Meeting the demand from employers cannot easily be achieved by increasing demand from UK students alone: not only are the demographics against us but admissions tutors continue to report that they are fishing in a relatively small pool of good UK applicants (a significant issue still to be addressed, but one clearly recognised if the early indications from the Government's response to the Science and Technology Committee's report [Educating Tomorrow's Engineers](#) is followed through). But success in attracting overseas students has brought with it an increased vulnerability for engineering departments within the current funding system. With the new visa regulations sending the message that overseas staff and students are not welcome in the UK threatening to damage the ability to fill the skills shortage and vibrancy of programmes, comes a more prosaic and immediate impact: re-balancing the numbers to cover programme delivery costs and investment requirements will be an increasing challenge.

In October 2012, the Engineering Professors' Council conducted [a poll of members](#) to ascertain recruitment figures for the 2012/13 entry to undergraduate and postgraduate engineering programmes. Around one third of the 83 departments responding to the poll reported a reduction in overseas postgraduate taught students for the current academic year. Three quarters of these, (mainly the largest UK Engineering departments) reported a reduction of more than 10%. Furthermore, half of all respondents reported fewer overseas undergraduates compared with 2011/12.

Overall we are concerned that, if the indications in our 2012/13 enrolments poll crystallise into a trend, we can expect some universities to be forced to reduce the broad range of engineering specialisms needed to deliver world-leading engineering education in the UK, with both national and regional implications. Against a

backdrop of continuing uncertainty in how Master's degrees are to be supported financially, this could well lead to the closure of specialised UK postgraduate programmes that support the sort of high-technology industrial innovation on which the UK must rely for its future economic growth.

## The response so far

Various agencies, including the British Council, UUK, the Missions Groups, the Campaign for Science and Engineering and the EPC have called for students to be excluded from the immigration statistics, as they are in other countries such as the USA and Australia. The lobbying culminated in February 2013 with the chairs of five Parliamentary Committees of MPs and Peers writing to the Prime Minister to demand that overseas students be removed from the official immigration target. The letter from the chairs of the Commons Science, Home Affairs and Public Accounts Select Committees, and the Lords Science and European Union Committees, said that student visa policy needs to encourage international university students to study in Britain, arguing that current policies create the perception that overseas students are not welcome in Britain and warning of potential damage to an export business worth £8bn a year. The joint letter says that encouraging overseas students has the potential to support economic growth, support jobs in university towns and increase export earnings, which are projected to rise to £17bn a year by 2025. "*International students who study in the UK also build relationships which last over time, laying the foundations for future business opportunities in emerging economies, and supporting our foreign policy objectives.*"

So far, there has been limited tangible response.

- In February, a new report was published from the Migration Advisory Committee (MAC) responding to the Government's proposed changes to the Shortage Occupation List (SOL). It recommended a reduction in the overall number of jobs covered by the SOL but to increase in the number of engineering jobs on the list. Most importantly, it recommended not to adopt the "sunset clause" proposed by Government which would allow jobs to be removed automatically from the SOL after two years. This is important for both student and staff applicants in considering where to work and study. The sunset clause had previously caused concern within the science and engineering community, with two years considered too short a duration in which to deliver the skills required in the strategically important STEM positions presently included on the SOL (for example, it can take 12 years for someone to achieve Chartered Engineer status, assuming they started by taking the correct A levels). However, alternative suggestions are still being considered include a 4-year sunset clause with the option for a case to be made to retain particular jobs on the list for a longer duration.
- In April, stating that the UK Government is "*committed to encouraging the brightest minds to come to study in Britain*", the Home Secretary announced that, from April 2013, all PhD students will be allowed to stay in the UK for twelve months following the completion of their studies in order to find skilled work or set up as entrepreneurs. She also announced an extension to the Tier 1 (Graduate entrepreneur) route, which will now include additional places for MBA graduates from UK Higher Education Institutions (HEIs). Neither of these changes really help undergraduate or postgraduate taught applicants.

So, together with the backdrop of uncertainty around future responsibility for implementation of the regulations following abolition of the UKBA, there has been no real change that will demonstrate that UK HE welcomes overseas staff and students: even if there were, it seems that it will take some considerable time to change the perception that has been created.

<sup>2</sup>Responses from 47 departments were received of which 32 (68%) were from Russell Group universities with a spread from around the UK.

## Where are we now?

A further poll of engineering departments in UK universities<sup>2</sup> carried out by the Engineering Professors' Council in April 2013 bears this out:

- 44% of those participating in the survey reported difficulties with recruitment of non EU staff with almost all of the respondents who reported difficulties indicating that the posts remain unfilled.
- 66% of survey participants reported difficulties with recruitment of non EU students, with a fifth of these reporting difficulties indicating problems at all levels of study and half reporting difficulties with postgraduate recruitment in particular.
- Examples of the issues and comments made may be found in the Appendix, but in summary:
  - The processes introduced with the regulations have made it harder for genuine fee-paying applicants to come to the UK; there are long waiting lists, complicated, inconsistent and opaque processes in which it is easy to make mistakes. (See Appendix: Staff 1-5, Students 10-22)
  - Applicants don't feel they are treated with dignity and respect and receive the negative message that genuine applicants are being mixed crudely with economic migrants. (See Appendix: Students: 23-31)
  - The rules are inflexible and not appropriate for staff on the sort of short-term contracts or work exchanges that are essential to research programmes and are often at odds with the requirements of cross-border research grants: the sort of grants in which the Government encourages academics to participate. (See Appendix: Staff 7-9, Students 32-35)
  - Staff and students are put off by the uncertainty of being allowed leave to remain to work following their programme or fixed term contracts (See Appendix: Staff 6, Students 36).

All of this seems to be adding up to have precisely the opposite effect of the intention to accept only genuine, high quality applicants. It seems that the highest quality applicants are going elsewhere, because they are best equipped to do so, and staff with the skills we need to contribute to our research capacity are finding it increasingly difficult to come to the UK on either short or long term contracts, and in some cases, even to fulfil the requirements of research grants to spend time in the UK.

Andrew Miller MP, Chair of the Parliamentary and Scientific Committee and fresh from his visit to the EPC Congress, summarises the position in his speech to the Commons on 8 May 2013.

*"My second point brings me back to education. There is an urgent need for the Government to decouple overseas students from the broader immigration debate. I strongly urge the Government to work with Universities UK to find a better way to deal with this massive industry. Something like £7 billion is at stake in the British economy. We have already seen losses from the Indian subcontinent. Given that about one in eight Chinese hopes to have their child educated abroad and that by 2020 that figure is predicted to be one in three, this is a massive potential market. I would like there to be a dialogue between the Government and Universities UK on creating a regulatory framework".*

EPC will continue to work with the agencies and influencers to bring about change.

## **Impact of the Visa regulations: Engineering Professors' Council Members' Poll (April 2013)**

The following verbatim comments paint a picture of the issues being faced

### **On the difficulties of recruitment of staff:**

#### **Processes: delays, opacity, complexity, inconsistency**

1. *...Delays in obtaining visas/work permits.*
2. *Lack of transparency in the UKBA processes.*
3. *Great difficulties in finding out the type of visa required and the route for migration from a student visa to a work visa.*
4. *On several occasions, I had difficulties in recruiting overseas research assistants. ...on a recent occasion, we had to wait for several months because the university ran out of quota.*
5. *The processing of visa applications is very slow. Communication is slow and usually by post rather than by e-mail. If there are small mistakes in the paperwork then it takes a long time for them to come to light and be fixed. I lost a very able post-doctoral research assistant because the slow processing of his paperwork meant that his original visa had expired and he (mistakenly) thought he had to return to his native country.*

#### **Concern regarding future work opportunities**

6. *We've lost some excellent candidates because they are afraid that they cannot stay after they finish the fixed-term contract.*

#### **Inappropriate inflexibility**

7. *I recently tried to recruit two Russian scientists on two consecutive 3 month contracts because of their outstanding expertise in the areas we are working. These are only short-term contracts....yet the visa regulations require them to pass stringent tests in written and spoken English. We have visited them in Russia and met them at conferences. Their English is perfectly adequate for us to have very high level discussions in science. But now I am in limbo while they see if they can pass the English tests...*

### **On the difficulties of recruitment of students:**

#### **Inconsistency with requirements of grant funding/research training**

8. *There seems to be a specific issue with mobility of students in FP7 Marie Curie Initial Training Network (ITN) projects. Our recent experience is that Non-EU Marie Curie Fellows at the level of ESR (a recently graduated Early Stage Researcher without PhD) find great difficulties in gaining visas for visits to the UK to participate in the mandatory training activities or in Network Meetings. These refusals make it impossible to comply with the terms of the Grant Agreements. For instance, a Non-EU researcher from Columbia employed by an ITN partner in Poland was refused a visa to join the Mid Term Review meeting where attendance by all ESRs is supposed to be mandatory. He was also refused a visa to attend a short course offered by the IMechE on the bizarre grounds that IMechE is not a university that is allowed to sponsor students. This is not an isolated incident. In the last 12-18 months the Border agency is routinely refusing visas for ESRs even for specific visits, let alone for multiple entry. We are using the same procedures as before, taking great care with the invitation letters, as before.*



*The Columbian researcher was able to get visas for his visits until 12 months ago. But now non-EU ESRs like him can't get visas to visit the UK to participate in activities of the projects. The outcome is that universities will have to think very carefully about coordination of ITNs in future, because we can't honour the Grant Agreements if the ESRs in the network cannot visit the UK. The UK will lose out on finance for R&D and highly trained people if UK universities can't coordinate ITNs.*

9. *We are having particular problems with activities such as exchange students - where a student might visit our labs for 3-4 months or so. These are vital to maintaining international research links and collaborations. It is getting almost impossibly difficult to make them work anymore.*

### **Processes: delays, opacity, complexity, inconsistency**

10. *Students denied visas or receive them too late to begin their studies.*
11. *Restrictive language conditions - over complicated visa regulations - complete lack of any flexibility in the system.*
12. *Delays in students obtaining a visa, preventing them meeting programme start dates.*
13. *Many postgraduate taught students from India, Pakistan and China are unable to obtain visas in time to start their course. Some postgraduate research students have to start their course late, or have significant problems obtaining a visa renewal. The UKBA policy on holding on to passports while a visa is processed is exceptionally harmful.*
14. *Students being accepted on academic grounds not turning up on time or in that year as they haven't got a visa on time.*
15. *A 3rd year undergraduate student was wrongly told by UKBA that he was not allowed to remain in the UK. He lost a lot of study time engaging lawyers and travelling to London to sort out the problem.*
16. *Very slow provision of visas, partly due to the concentration on very few visa processing centres. Great differences in the treatment of applicants with the same background.*
17. *The rules are applied extremely strictly and there are long delays. As a result, they often miss the start date and this again complicates the process. They have to apply for the right start and end date.*
18. *Long lead time in getting visa approvals.*
19. *Original documents to be sent instead of attested copies.*
20. *Personal interviews required in some cases. Major expense and time impact in large countries for the students affected.*
21. *Although we issue offers to applicants well in advance, their visas are delayed or refused.*
22. *Recruitment has actually been fine, but we are losing some students who have accepted offers because of delays in issuing their visas and some postgraduate research students are having to defer their term of entry for the same reason. Pakistan, Mexico and Nigeria have been particularly problematic.*

### **Poor perception of UK as a place to study**

23. *It is making students feel unwanted in the UK despite coming with full funding including language course.*
24. *On the undergraduate side we have seen a decline in the number of applications from International students and I do believe that the restrictions have contributed to this.*
25. *We seem have lost ground attracting high calibre applicants. These seem to be heading to the USA or Canada. UKBA restrictions post-graduation appear to dampen the desire for high achievers to study in UK. This is real shame. If this policy continues, it is likely some postgraduate programmes would close, as the outputs are not in-line with expected norms.*

26. *Recruitment at undergraduate and postgraduate level has suffered in the last 2 years. We have also noted that we are not getting the same high calibre applicants amongst students at postgraduate level. 2012/13 was particularly poor. This is not good for staff morale.*
27. *Recruitment of overseas students generally but particularly from India is dramatically reduced. We have even heard statements like "the UK is now a student unfriendly country" from both agents and students alike.*
28. *Variable visa turnaround times, loss of post-study work visa (for some regions in particular), seeming perception of 'unfriendliness' of UK (anecdotal from India, China).*
29. *We have experienced a severe decline in the number of Indian students applying, and indeed accepting offers, to study in the UK. We estimate at least 25 fewer Indian students are now enrolled on our courses compared to pre-post-study work visa revisions. Experience from overseas recruitment trips has worryingly indicated that students are concerned that they are not only restricted in the time they can stay in the UK, but that they are also not welcome to study here.*
30. *All leading to a general feeling among prospective students that the UK is not welcoming of foreign students and best avoided.*
31. *While our home application numbers have risen sharply in the last two years, bucking the trend for many in the sector, our OS numbers have dropped slightly. This is significant change as the trend until ca 2011 was 5-10% growth in applications per annum. We are now struggling to meet targets set out for recruiting OS students that seemed realistic only 24 months ago.*

#### **Inappropriate inflexibility**

32. *Any flexibility in the system has disappeared and the past practice of offering students an interview to establish language suitability is not allowed in my institution.*
33. *It proved to be impossible for an overseas student who was registered at one UK university to do a six-month placement at another UK university.*
34. *Here the primary issue is the difference in fee, and the constraint that many funding sources pose on the nationality of the PhD student. Personally, I think the constraint should be on where the research is done, not on the nationality of the student. We do want the best students world-wide, don't we?*
35. *English exams when none were needed previously for some countries.*

#### **Concern regarding future work opportunities**

36. *Recruitment of taught postgraduate students from overseas, and particularly, India has been particularly difficult since the post-study work visa reduced the time students are permitted to seek work within the UK following on completion of their studies from two years to four months.*