

17 October 2006

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Dear Alan

### **Strategically Important and Vulnerable Subjects**

Your predecessor Charles Clarke wrote to me on 1 December 2004 asking for the Funding Council's advice on a number of issues, notably strategically important and vulnerable subjects. Following HEFCE's update to your department earlier this year I am now pleased to let you have a more formal report on our progress to date in support of the following strategically important and vulnerable subjects:

- science, technology, engineering and mathematics
- area studies and related minority languages
- modern foreign languages
- land-based studies
- quantitative social science.

I attach a report that shows the range and scope of our activity to sustain strategic subjects. We estimate that we have already committed some £160million to generate enthusiasm and interest in strategic subjects among young people; support research collaboration; and sustain research capacity in critical areas of importance to the nation.

The report updates the data analysis that informed the work of our strategic subjects advisory group (HEFCE 2005/24). This analysis highlights trends in student numbers in all subjects over the period 1999-2000 to 2004-05. We are monitoring all subjects for vulnerability but recognise that it is for the Government to make judgements on which subjects are strategically important at any given time.

I have included data from UCAS that considers applications to study particular discipline areas over the period 2002-03 to 2005-06. This shows some encouraging signs that applications have stabilised and increased in many Science, Technology, Engineering and Mathematics (STEM) disciplines. The data in the coming years will tell us if this interest in STEM subjects is sustained.

You will wish to know that HEFCE's Board recently reconsidered the issue of strategic subjects and endorsed the policy framework that was set by HEFCE's advisory group on this matter (published as HEFCE 2005/24 and available at [http://www.hefce.ac.uk/pubs/hefce/2005/05\\_24/](http://www.hefce.ac.uk/pubs/hefce/2005/05_24/)). My Board has decided to review the framework in 2008 in the light of our assessment of the effectiveness of the pilot programme we have been running, and the resources available following the 2007 comprehensive spending review.

I am also pleased to report that HEFCE has written to institutions setting out our approach to communicating with and supporting institutions if they are considering closing departments that teach strategically important and vulnerable disciplines. Further details are available at [http://www.hefce.ac.uk/pubs/circlets/2006/cl17\\_06/](http://www.hefce.ac.uk/pubs/circlets/2006/cl17_06/).

I would like to commend this programme of work to you. I hope you will agree that HEFCE is adopting a positive and coherent approach to tackling complex problems that are of worldwide concern. David Eastwood and I would of course be very happy to discuss this with you when we meet later this month.

Yours sincerely

David Young  
Chairman, HEFCE

Copy: Bill Rammell MP, the Minister of State for Lifelong Learning, Further and Higher Education.

October 2006

# HEFCE's support for strategically important and vulnerable subjects

**Report from HEFCE to the Secretary of  
State for Education and Skills**

# HEFCE's support for strategically important and vulnerable subjects

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## Executive summary

1. This report provides a formal update to the Secretary of State for Education and Skills on HEFCE's £160 million programme of work to support strategically important and vulnerable subjects.

2. We believe it is essential that disciplines and subjects that are of strategic importance to the nation are sustained and developed so that the public interest in England's higher education is secured.

3. The principles and policy to guide our programme were set by an advisory group chaired by Professor Sir Gareth Roberts in June 2005 (see HEFCE 2005/24). In summary, Sir Gareth's group advised that:

- the dynamism of the HE sector is a great strength. Action should therefore be proportionate to the problems we find
- each strategic and vulnerable subject will have its own characteristics that will require a tailor-made solution

4. Since then we have worked in partnership with a wide variety of stakeholders, using a sound and reliable evidence base, to support and develop strategically important and vulnerable subjects. Stakeholders include, but are not limited to, funding bodies, Royal Societies and professional bodies, subject associations and groups concerned with widening participation into HE.

5. In tandem with this we keep a watching brief on the potential national consequences of individual department closures to monitor whether current provision is out of step with national or regional need. Acting with regional partners, such as Regional Development Agencies, we are able to sustain disciplines of strategic importance in a region where an individual HEI's decision may have led to some decline. We also keep abreast of the data so that we can understand trends over time in strategic subjects. This helps us to recognise the vulnerability of individual strategic subjects. Over the longer term, these data will help us understand the impact of our work to encourage more people to study strategic subjects in higher education.

6. Looking forward, we will evaluate the effectiveness of our programme of work to support strategic subjects during 2007-08. The results will help inform the work of an advisory group in 2008, which will consider whether the policy framework we have in place is still fit for purpose in a more marketised higher education environment. The results of future government spending reviews will also help determine whether we are able to continue with this level of investment in strategic subjects in the future.

## Background and context

7. On 1 December 2004, the Secretary of State for Education and Skills wrote to HEFCE requesting the Council's view on 'whether there are any higher education subjects or courses that are of national strategic importance, where intervention might be appropriate to enable them to be available....and the types of intervention which it believes could be considered'. The Secretary of State's letter included a list of subjects that had been deemed strategically important by the Minister's Cabinet colleagues.

8. In response to this, we set up a Strategically Important Subjects Advisory Group, chaired by Professor Sir Gareth Roberts, which met three times between January and April 2005. The group was charged with providing HEFCE's Chief Executive with advice on a number of issues, including:

- a. A rationale, process and criteria for identifying academic subjects as being of strategic importance, both now and in the future; and for identifying those strategically important subjects that are particularly vulnerable.
- b. The nature of support required by vulnerable strategically important subjects that the Council or others could appropriately offer.

9. The advisory group was mindful of the steer given by the Minister that 'in framing your advice, I would like you to bear in mind the core principle that higher education institutions are and must remain autonomous, independent bodies, making their own decisions'.

10. Sir Gareth's group focused on the following subjects which they considered to be both strategically important and vulnerable:

- a. Science, technology, engineering and mathematics (STEM subjects).
- b. Area studies and related minority languages, including:
  - i. Arabic and Turkish language studies and other Middle Eastern area studies, former Soviet Union Caucasus and central Asian area studies.
  - ii. Japanese, Chinese, Mandarin and other Far Eastern languages and area studies.
  - iii. Courses relating to recent EU accession countries, especially those in Eastern Europe and the Baltic (including new accession countries such as Bulgaria and Romania scheduled for entry in January 2007).
- c. Modern foreign languages.
- d. Land-based studies.
- e. Quantitative social science.

11. The final report from the group was published in June 2005<sup>1</sup>. In summary, it advised that:
- a. The dynamism of the English HE sector is a great strength, and interventions should, as a rule, be kept to a minimum.
  - b. Attention should be focused on subjects which are both strategically important and vulnerable. Vulnerability may be measured by a mismatch between supply and demand, or by a concentration of the subject in institutions which may be vulnerable to change. Departmental closures do not of themselves mean vulnerability.
  - c. There is a range of approaches open to HEFCE, according to the nature of the mismatch between supply and demand for each subject. These need to be deployed within a clear framework and only where there is evidence to warrant intervention. The key principles of such a framework should be:
    - i. A clear evidence base.
    - ii. Wherever possible to support a market-led solution.
    - iii. To look at issues holistically and ensure that problems of demand are not addressed with supply-side solutions (and vice versa).
    - iv. To seek wherever possible to work in partnership with all those with an interest in protecting strategic and vulnerable subjects.
    - v. To intervene only where we have a clear understanding of the nature of the problem, where it is located and where HEFCE intervention is appropriate.
12. To inform the work of the advisory group, HEFCE produced a range of data including from the Higher Education Statistics Agency (HESA), from UCAS and A-level results. The group also looked at a time series (1999-2000 to 2003-04) across a number of datasets for STEM subjects, concentrating particularly on undergraduate provision in the first instance. The advisory group carefully considered these data in order to judge the vulnerability of disciplines deemed strategic by the Secretary of State and his Cabinet colleagues.
13. After an in-depth discussion of the data, the advisory group agreed that modern foreign languages, land-based studies and quantitative social science were vulnerable and should be added to the list of subjects deemed both strategically important and vulnerable. Annex B to HEFCE 2005/24 provides the detailed data.
14. The group advised, furthermore, that the closure of departments in strategically important subjects does not of itself mean that a subject is vulnerable. Departments may not always close due to a shortage of student demand; sometimes closure is due to strategic realignment or because a course is deemed too expensive to run. Provision may be transferred elsewhere or become part of new academic cost centre. Capacity, in the advisory group's view, may be redeployed and often maintained in a manner that takes the

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<sup>1</sup> The full report (HEFCE 2005/24) is available at on the web at [www.hefce.ac.uk](http://www.hefce.ac.uk) under Publications.

discipline forward in innovative ways. The HEFCE Board reconsidered, and endorsed, this advice at its June 2006 meeting.

### **Horizon scanning: working with institutions**

15. We keep a watching brief on the potential national consequences of individual departmental closures to monitor whether current provision is out of step with the national or regional need. One of the ways we do this is through our regional teams, which are dedicated to supporting higher education providers in England. Regional teams act as the main interface between HEFCE and universities and colleges; they have an excellent understanding of local contexts as well as regional and national developments. Acting with regional partners (typically Regional Development Agencies and HEIs) we are able to sustain, and sometimes increase, academic capacity in a region where an individual decision alone may have led to its decline.

16. To take one example, following the University of Exeter's decision to close its chemistry department, we were able to support the transfer of students to the universities of Bristol and Bath. According to the vice-chancellor of the University of Exeter, HEFCE acted as: 'an enormously supportive broker. They have worked with us and other universities in the region to come up with a solution which actually increases the number of funded places for chemistry in the south-west. Our analysis is that by working collaboratively through HEFCE we have been able to come to a solution which we think strengthens chemistry provision in the long term, and I welcome that role of HEFCE as a broker rather than a manager or a planner.'<sup>2</sup>

17. We have asked for early and strategic discussions with institutions that are considering closing departments that teach strategically important and vulnerable subjects (SIVS)<sup>3</sup>. With advance warning we can provide support and, with the institution's agreement, consider the possibility of transferring provision to other HEIs. Universities and colleges have welcomed this approach which will, in turn, help us proactively to manage change in the sector.

### **Horizon scanning: analysing the data**

18. Our close working relationship with institutions gives us early intelligence about potential department closures. In tandem, we consider data from HESA and other sources to examine trends over time in numbers of people studying all disciplines, not just the ones that the Government has identified as strategic. These data and analyses help us to assess the vulnerability of strategic subjects and, over the longer term, will help us understand the impact of our work to generate enthusiasm and interest in strategic subjects among young people.

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<sup>2</sup> House of Commons Science and Technology Select Committee, *Strategic Science Provision in English Universities*, Eighth report of session 2004-5, Volume II, (Paragraph Q403, Professor Steve Smith).

<sup>3</sup> See HEFCE Circular letter 17/2006, on the web at [www.hefce.ac.uk](http://www.hefce.ac.uk) under Publications/Circular letters.

19. We have updated by one year (at Table 1) the HESA cost centre analysis that informed the work of the Strategically Important Subjects Advisory Group, to cover the period 1999-2000 to 2004-05. Institutions assign academic departments to 35 cost centres that are determined by the department of the member of staff teaching the activity. We can then count numbers of students (expressed as full time equivalents, FTEs) that are studying in respective cost centres to help us understand trends in undergraduate interest across broad discipline areas.

20. Because we have only one extra year's data available, it would not be meaningful to compare the analysis contained in the advisory group's report, available in HEFCE 2005/24, with the data in Table 1. We have, however, examined UCAS data<sup>4</sup> on applications to study full time at English universities and colleges from any domicile (home, EU and overseas) over the period 2002-03 to 2005-06. Applications via UCAS are available some two years before HESA data; these data therefore provide us with early indications about the numbers of people wanting to study particular disciplines.<sup>5</sup>

21. Considering HESA and UCAS data we find the following for SIVS.

#### Chemistry

22. HESA data show that home FTE student numbers appear to be stabilising at some 9,500 FTEs in 2004-05, following a period of decline during 1999-2000 to 2001-02. Applications to UCAS to study chemistry as a preferred subject have remained stable over the period 2002-03 to 2004-05 at around 2,800 applicants. There are encouraging signs of growth in 2005-06, however, which mean that overall applications have increased by 11 per cent over the period 2002-03 to 2005-06.

#### Physics

23. Student numbers (expressed as FTEs) have remained stable over the past six years at some 8,500 home FTEs, while EU numbers have declined to around 350, and international numbers have risen also to around 350 FTE. UCAS applicants to study physics as a preferred subject have remained stable at around 3,100 applicants over the four years from 2002-03 to 2005-06. Taken as a whole, applications to the physical sciences have increased by 5 per cent over the same period.

#### Engineering

24. The cost centre data show decreases in home FTE students in mechanical, aeronautical, and production engineering; general engineering; and mineral, metallurgy and materials engineering over the period 1999-2000 to 2004-05. However, the latter cost centre has stabilised in recent years (2002-03 to 2004-05) at some 2,582 home FTEs in 2004-05.

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<sup>4</sup> <http://www.ucas.ac.uk/figures/ads.html#instsubj>

<sup>5</sup> Note that not all applications will be accepted to study particular disciplines, and that UCAS figures exclude direct and part-time entrants.

25. Conversely, we note a 7 per cent increase in home student numbers for civil engineering and for electrical, electronic and computer engineering over the period 1999-2000 to 2004-05. Chemical engineering has reversed an earlier decline, with home FTEs increasing by some 6 per cent over the period 2002-03 to 2004-05.

26. Considering (via UCAS applications) the engineering group of disciplines, we find that there has been an 8 per cent increase in applicants over the period 2002-03 to 2005-06 to 22,858 prospective students. Within this subject group we find mixed fortunes for individual disciplines: for example large increases in applicants to civil engineering programmes (a 46 per cent increase to 3,897 applicants), but a decrease in applicants with electronic and electrical engineering as a preferred subject of study (a 17 per cent decrease to 5,459 applicants) over the period 2002-03 to 2005-06.

#### Mathematics

27. Home domiciled students in this cost centre have decreased by 11 per cent over the period 1999-2000 to 2004-05. However the decrease stabilised over the period 2002-03 to 2004-05 to a base of some 17,028 FTEs. In contrast, EU and international students over this later period increased by 23 and 42 per cent respectively. Applications to study mathematics as a preferred subject have increased by 52 per cent over the period 2002-03 to 2005-06 to 5,063 applicants.

#### Earth, marine and environmental sciences

28. There was a 12 per cent drop in home undergraduate FTEs in the earth, marine and environmental sciences cost centre over the period 1999-2004. However home student numbers remain at some 11,990 FTEs in 2004-05.

#### Modern languages

29. Home FTEs have increased by 7 per cent over the period 1999-2000 to 2004-05 in this cost centre, but we note that this will not necessarily reflect only numbers of people taking language courses. It includes those taking some language study as part of another course<sup>6</sup>. This shows that there has been a 2 per cent decrease in student enrolments across all language subjects across the UK (home/EU and overseas students), but this masks a degree of variation across different language subjects.

30. Applications, via UCAS, to study European languages and literature have increased to 4,498 in 2005-06, an increase of 9 per cent since 2002-03. Non European languages, literature and related studies, in contrast, have seen a decrease of 7 per cent over the period 2002-03 to 2005-06.

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<sup>6</sup> A fuller investigation into trends in modern foreign languages is available at <http://www.hefce.ac.uk/aboutus/sis/mfl.htm>.

## Biosciences

31. In line with the analysis in HEFCE 2005/24, biosciences show virtually constant home student numbers, but major growth in international students which more than offsets the decline in EU numbers. UCAS data shows that applicants to biological sciences group of disciplines have increased by 12 per cent overall over the period 2002-03 to 2005-06.

## **Health and sustainability of the research base**

32. We work in partnership with the Research Councils to help inform our wider understanding about the health of the research base<sup>7</sup>. The UK Research Base Funders' Forum publishes regular reports that examine the health and sustainability of disciplines and sub-disciplines in the UK. These reports have led to schemes to attract postgraduates into shortage areas and to enhance career structures. In addition, the Research Councils, in collaboration with the higher education funding bodies, have implemented a number of capacity-building schemes to address areas of immediate concern. Examples include:

- the Engineering and Physical Sciences Research Council (EPSRC), HEFCE and the Scottish Funding Council have launched the Science and Innovation Awards scheme to secure strategically important research areas that are missing or at risk in the UK. Funds are used to foster research groups in areas of national need within EPSRC's remit
- the Biotechnology and Biological Sciences Research Council (BBSRC), the Medical Research Council (MRC) and the UK's higher education funding bodies, together with the pharmaceutical industry, have established an £11 million fund to build capacity in integrated mammalian biology
- the Arts and Humanities Research Council (AHRC), Economic and Social Research Council (ESRC) and HEFCE have launched a £20 million initiative to develop world-class researchers with language skills to undertake research to help the UK's understanding of the Arabic world, China, Japan and Eastern Europe.

## **International context and the growth of medically related subjects**

33. To set the data in an international context, we note that many of the subjects we are concerned with have similar vulnerabilities in other countries – in particular a downturn, in the Western world at least, of interest at all levels in STEM subjects<sup>8</sup>.

34. In contrast to the differing fortunes of SIVS disciplines, it is interesting to consider medically related subjects. Professor Sir Gareth Roberts' advisory group noted the rapid increase in student numbers in medicine, dentistry and veterinary subjects over the period

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<sup>7</sup> See <http://www.rcuk.ac.uk/documents/hod.asp>

<sup>8</sup> Sveva Avveduto (2004), 'Fostering The Development of Human Resources for Science and Technology', proceedings of the CNR-OECD conference Rome, 5-6 June 2003

1999-2000 to 2003-04. During this period, for example, medically related subjects increased by some 9,700 FTEs against a fall over the same period of some 2,100 FTEs in chemistry, biosciences and physics.

35. These trends are continuing: home FTEs in clinical medicine, for example, have increased by 19 per cent (20,863 FTEs) over the period 2002-03 to 2004-05; and home student numbers in pharmacy increased over the same period by 1,155 FTEs. Similarly, UCAS figures show that applications to study medicine and dentistry as a preferred subject continue to show strong growth: between 2002-03 and 2005-06 applications increased by some 62 per cent to 22,039 applicants. Applicants to study subjects allied to medicine have also increased, by 55 per cent over the same period to some 41,441 applicants.

36. The advisory group argued that 'students are not simply shying away from "harder" science subjects....Rather, this may be seen as a move to undergraduate degrees offering more obvious vocational output'. This conclusion, given the evidence we have before us, still stands.

### **HEFCE's programme of work to support strategically important and vulnerable subjects**

37. We have developed a programme of work tailored to the specific vulnerabilities of each subject, which is informed by the policy framework set by Professor Sir Gareth Roberts' advisory group. This programme is proceeding hand in hand with the initiatives and funding streams that support our strategic aims, many of which provide national and regional support for strategic subjects. Examples are:

- Centres for Excellence in Teaching and Learning (CETLs). An example is the Centre for Effective Learning in Science at Nottingham Trent University (see <http://www.ntu.ac.uk/cels/> for further information). This CETL aims to create a new image for science within both school communities and higher education, as more relevant, accessible and achievable
- Lifelong Learning Networks (LLNs). For example, the STEM hub of the West London LLN. This aims to address two persistent problems: the shortage of trained personnel, particularly at advanced technician levels, in scientific, engineering and technological sectors; and the resistance of learners, especially from non-traditional backgrounds, to train for and enter these professions
- the allocation by HEFCE of additional funded student numbers (ASNs): 5,273 FTE student places in the HE sector have been awarded for STEM disciplines over the period 2006-08 at a cost of some £29 million
- support to drive research collaboration between business and higher education in the regions, as with the Great Western Research initiative. Supported jointly with the RDA, our £4 million grant supports structured research collaboration in academic fields (including materials sciences, applied mathematics and sustainability) that can make a

significant contribution to the developing regional economy. Partnerships with industry attract further financial support for the project

- HEFCE acting as a broker for positive change in the sector, such as our work to increase Japanese provision at Oxford Brookes University in partnership with Oxford University and the local Regional Development Agency.

38. A snapshot of our activity to support SIVS, alongside details of our existing and planned financial commitments, is available below. A conservative estimate, however, would indicate that for the five years to 2011-12 we have potentially committed some £160 million in support of SIVS, plus 2,127 ASNs in support of LLNs (the costs of which we have not attempted to quantify). We are anticipating an additional call on our resources of some £20 million to complete, and bring some coherence to, our programme of support for strategic subjects. This figure may expand, but will depend on:

- successful outcomes of bids from HEIs to our Strategic Development Fund and the availability of resources within it
- robust evaluation evidence about the effectiveness of what we are doing in the short, and medium term, and indicators that it might be effective in the longer term
- the priorities given to this work in government spending reviews.

39. Alongside our routine monitoring of the health of both the sector and academic disciplines, we will convene another advisory group – similar to that chaired by Professor Sir Gareth Roberts in 2005 – to review and evaluate the policy framework that guides our approach to strategic subjects. We intend to do this in 2008.

### **Science, technology, engineering and mathematics (STEM)**

#### STEM demand side work: aspiration raising and outreach

40. We have sought to increase and widen participation in these subjects by working through existing structures, including Aimhigher and the Science, Engineering, Technology and Mathematics Network (SETNET). Although individual professional bodies have led the way, they have taken a very inclusive approach, working (for example) with CETLs, Higher Education Academy subject centres, RDAs, and Sector Skills Councils. We will also take account of the way in which the recommendations from the Langlands Review, 'Gateways to the Professions'<sup>9</sup> are taken forward.

41. We have awarded funding to the following:

- a. The Royal Academy of Engineering and other partners have been awarded £2.85 million from HEFCE's Strategic Development Fund, SDF, (with a further £3.4 million in contributions from the project partners) to develop a pilot initiative, the London Engineering Project. The project intends to widen and significantly increase participation in engineering in higher education for four target groups: women, minority

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<sup>9</sup> Details are available at <http://www.dfes.gov.uk/hegateway/hereform/gatewaystotheprofessions/index.cfm>

ethnic students, students from families where there is no experience of higher education, and adult learners. The funding covers the period from September 2005 to March 2008.

b. Chemistry for our Future is a project led by the Royal Society of Chemistry. It was approved by the March 2006 SDF panel and awarded a total of £3.6 million over two years for the pilot phase. This was in addition to £281,900 awarded in January 2006 to extend the Chemistry: The Next Generation Aimhigher national project; a further £226,000 committed by the Royal Society of Chemistry, £625,000 secured from the Gateways to the Professions fund and £50,000 from NESTA). The project aims to ensure that there is a wide and sustainable HE chemistry community across England, which attracts able students from all backgrounds and provides chemical science courses that are appropriate for both students and employers. The project will build on the work of the Chemistry: The Next Generation project.

c. The Stimulating Physics project (led by the Institute of Physics, IOP) was approved by the March 2006 SDF panel and was awarded a total of £1.785 million over two years (with an estimated £390,000 in-kind contribution from the IOP) for the pilot phase. The project aims to increase participation in physics-based courses in HE; broaden the pool of entrants to such courses; and build on the current IOP initiatives in this area by means of evidence-based activity.

d. A project on Increasing the Supply of Mathematical Science Graduates is being led by the Higher Education Academy's subject centre for maths, statistics and operational research. It was approved by the June 2006 SDF panel, and awarded funding of £3.3 million over three years for the pilot phase (with a further £30,000 committed by the Institute for Mathematics and its Applications, £21,000 committed by the Royal Statistical Society and £15,000 by the London Mathematical Society). The project aims to widen participation within the mathematical sciences from groups of learners who have not previously been well represented in HE, and to increase the supply of mathematical science graduates in England so that the demands of industry, commerce and education might be better met.

42. We have provided development funding to the British Computer Society (BCS) to develop a similar project. The BCS has held extensive discussions with stakeholders and expects to submit its bid to the SDF panel in December 2006.

#### Research capacity building

43. Within the broader context of strategic and vulnerable subjects, a range of research capacity building initiatives is in train, discussed below. These have been identified by the Research Councils, through their 'health of disciplines assessment' which is an ongoing work stream of the Research Base Funders' Forum.

#### *Science and innovation awards*

44. The Engineering and Physical Sciences Research Council, HEFCE and the Scottish Funding Council are working together to support universities in growing research activity in

'at risk' areas within engineering and physical sciences. To date we have supported two rounds of awards (including the pilot round) in areas such as chemical engineering and the life sciences, mathematical statistics and nanotechnology. HEFCE has contributed £3.2 million to date to and has earmarked a further £4 million for the next round of awards.

#### *Capacity building awards in integrative mammalian biology*

45. A consortium of funding partners including HEFCE, the Scottish Funding Council, BBSRC, the MRC, Pfizer and GlaxoSmithKline have committed £12 million to fund four capacity building awards throughout the UK, focusing on research and training methods involving 'in vivo' techniques. HEFCE has contributed £4 million to this fund. The awards will be announced shortly, and have been granted to: Imperial College, King's College, the Universities of Manchester and Liverpool (collaborative bid), and the University of Glasgow.

#### *Further initiatives*

46. We have a number of requests for further capacity building initiatives, including two further rounds of Science and Innovation awards and support for quantitative social sciences in partnership with ESRC.

#### **Modern foreign languages**

47. On 25 September 2006 we announced a £4.5 million programme to encourage the take-up of language courses in England.

48. Under the programme, a number of regional networks will be established in which HEIs will work together with schools and colleges to enthuse people about studying languages. National consortia will be set up to promote translation and interpreting as careers; and research projects will be commissioned to help universities develop programmes in community languages.

49. The programme, called 'Routes into Languages', will run for four years from 2006-07 to 2009-10. It will be led by the UK Subject Centre for Languages, Linguistics and Area Studies in a partnership with the University Council of Modern Languages and CILT, the National Centre for Languages.

50. Routes into Languages aims to increase the take-up of language courses in higher education by encouraging more young people to continue studying languages at school and college and then at university, especially those from social groups currently under-represented in language study. A key feature is to provide the secondary, FE and HE education sectors with the resources to work together to promote language study. It will also raise awareness of the role of languages in HE as a driver of national economic and civic regeneration.

#### A common languages dataset

51. Underpinning, and in parallel with these developments, we have worked with the DfES, HESA, Universities UK and CILT to agree a common dataset to better understand the health of modern foreign languages. This dataset comprises student enrolments over the three-year period 2002-03 to 2004-05 (but it excludes the Open University, which accounts

for some 5 per cent of the language student population). Analysis of the dataset shows the following:

- a. There has been a 2 per cent decrease in student enrolments across all language subjects across the UK (home/EU and overseas students).
- b. For first-degree students, there has been a larger decrease, of 6 per cent. However for postgraduate taught courses, there has been an increase of 16 per cent.
- c. Considering UK-domiciled students only, similar decreases are seen for full-time students but there is a smaller increase in postgraduate taught numbers (7 per cent).
- d. The overall figures mask a degree of variation across different languages. For example, first-degree students had an overall decrease of 6 per cent, but numbers of enrolments rose by 20 for first degrees in Japanese and numbers for Italian studies dropped by 10 per cent.

52. The dataset will be updated annually. This will enable us to monitor the trends in modern foreign languages across various levels of study and subjects of study.

#### **Area studies and associated minority languages**

53. Our approach to area studies and related languages has been to work with the relevant Research Councils – the Arts and Humanities Research Council (AHRC) and the Economic and Social Research Council (ESRC) – who have themselves identified through their own health of disciplines exercise the need to build expertise in critical areas. We developed our initiative in discussion with the Research Councils, other funding councils, user representatives and subject groupings. This all fed into a proposal for an initiative to fund centres for area studies and related languages, which was discussed at a 'town meeting'. The funders then invited proposals for establishing centres in October 2005.

54. The main aim of the initiative is to create a world-class cadre of researchers to enhance the UK's understanding of the Arab world, China and Japan, Eastern Europe and the former Soviet Union. The initiative involves an annual allocation from the funders of around £4.5 million, provided flexibly to centres (which could be collaborative partnerships) in each critical subject area. Funds will support masters and doctoral studentships, and academic fellowships; a programme of tailored language-based training for postgraduate students and academic staff working in any UK institution, in any subject area within the arts, humanities and social sciences, and at any stage of their studies or careers; and the costs of networking and collaboration.

55. All the funders have limited resources for intervention and acknowledged that this is an experimental approach, bringing together languages, area studies and relevant disciplines. So the initial phase focused on four priority areas (Arab world, China and Japan, Eastern Europe and the former Soviet Union).

56. A joint panel of the funding bodies made final decisions on selected centres in April 2006. Further details about the funded centres are available at <http://www.hefce.ac.uk/news/hefce/2006/esrc.htm>

57. The funders are continuing to work together to support centres in the set-up phase, and to consider the future of the scheme (including extending present centres to cover other minority languages and areas of priority, and future rounds of funding).

### **Land-based studies**

58. The land-based studies review (LBSR) will seek to establish the current state of higher education provision in land-based subjects in England, and to identify whether any action is needed to ensure it is viable in the long term. In this context, higher education covers a broad range of educational and training provision at undergraduate and postgraduate level in HEIs and further education colleges, as well as research activities, industrial links and economic and business development activities. The review will consider the most appropriate ways of supporting land-based subjects so that HE provision meets the needs of students, employers, government and skills requirements nationally and regionally (bearing in mind HEFCE's funding and planning constraints).

59. The LBSR Advisory Group has met with HEFCE twice formally and once informally to offer expertise on the progress and direction of the work.

60. In May 2006 consultants SQW and JM Consulting were awarded contracts to carry out the review following a competitive dialogue. The review is due to report in December 2006.

61. In addition to this, the Biotechnology and Biological Sciences Research Council (BBSRC) contacted HEFCE about the possibility of collaborating on a UK-wide review of land-based studies as part of the existing LBSR. Following correspondence there has been an initial meeting between HEFCE and BBSRC staff. It has been agreed that BBSRC will review the research provision for land-based studies across the UK, looking at HEFCE-funded and other research facilities. The review will be carried out in partnership with a number of funding bodies and other interested parties.

### **Research collaboration**

62. We held a seminar with senior managers from HEIs on 27 September at which we discussed possible forms of strategic research collaboration and what HEFCE might do to support HEIs in engaging in these. There will be a further discussion of our policy at the HEFCE Board in December, informed by advice from the Board's research committee. We have, however, already had some encouraging interaction with particular groups of HEIs. In particular:

- a. In June 2005 we agreed a grant of £4 million to support a structured research collaboration between the universities in the South West in five specific academic fields (known as 'Great Western Research'). This is also funded by the RDA on the basis that the selected fields can make a significant contribution to developing the regional economy; partnerships with industry have attracted further financial support. Great Western Research is led by the Universities of Bath, Bristol and Exeter, but HEIs across the South West are engaged through the studentships strand of the project.

- b. Two groups of universities have approached us with proposals for collaboration in physics. We hope to receive shortly a developed proposal from a group of research-strong universities in the Midlands for collaboration in both research and teaching. We are also discussing a possible research-based collaboration with a group of institutions in the South East. All have with research strengths in physics but on a scale that could make sustaining capacity and investment in new developments hard to achieve individually.

### Open University

63. In May, the SDF panel of the HEFCE Board agreed to fund a proposal led by the Open University (OU) to pilot ways of working collaboratively to create new models of course development and delivery linked to strategically important and vulnerable subjects. The agreed funding is for £2.2 million over five years for the OU to work in partnership with 12 HEIs.

64. The project consists of two pilot projects and a feasibility study:

<b>Model of working</b>	<b>Subject</b>	<b>Partners</b>
<p>An adaptation of OU teaching materials for use under licence.</p> <p>Objective: to enhance the delivery of subjects in partner HEIs by providing teaching materials that would support a varied student intake and facilitate rapid progress by those students with a lower previous qualification.</p>	German	Aston University, Coventry University, University of Portsmouth, University of Reading, Royal Holloway, University of Southampton, Nottingham Trent University, University of Central Lancashire
<p>2 + 2 model, incorporating full-time and part-time study.</p> <p>Objective: to create new entry routes into traditional degree programmes for students from non-traditional backgrounds. For example, mature students in employment who do not wish to commit to a full-time programme.</p>	Chemistry Physical Sciences	Loughborough University, University of Reading, Royal Holloway, Nottingham Trent University, Lancaster University, University of Salford, University of Sheffield
<p>Feasibility study into the collaborative development of resources for strategic languages.</p> <p>Objective: to support national capacity in subject areas of patchy or low demand, but of strategic importance, through collaborative curriculum design.</p>	Mandarin Chinese Arabic	University of Portsmouth, University of Southampton, Nottingham Trent University, University of Salford, School of Oriental and African Studies

65. The partners believe that there is scope to encourage new entrants into SIVS subjects by combining OU materials and learning methods with more traditional routes. This is at present unproven. The funding is therefore designed to test whether these models would work on a larger scale, whether they could be extended to other subject areas, demand for such provision, and the critical mass of students needed to make the projects viable in the longer term.

66. Ultimately this could become a cost effective national resource to support undergraduate teaching of SIVS subjects to small cohorts of students (for example at FE colleges).

## Funding awarded in support of SIVS from 2005-6 to 2011-12 and potential calls on our resources in support of SIVS

### Funding committed

Subject area	Initiative	HEFCE funding	Co-funding from partners
<b>Languages</b>			
Rare languages and small subject areas	Minority subjects	£3M/year over 2005-06 to 2011-12 = £15m	
Research capacity: Arab world, China and Japan, Eastern Europe and the former Soviet Union	Area Studies and Related Languages (ASRL)	£11.8M over 5 years from 2006-07	£14.8M over 5 years from AHRC, ESRC and SFC
Japanese at Oxford Brookes University	Additional student numbers (ASNs) via the managed growth route	30 ASNs = £110k	From RDA
Modern foreign languages at the University of London's constituent colleges	As above	240 ASNs= c£1M	
Languages	Routes into languages: regional pilots to widen and increase participation in language study	£4.5M	Likely via 'Gateways to the Profession' funding
Languages of the Wider World	Centre For Excellence in Teaching and Learning (CETL)	£2.5M over 5 years. £2.35M capital	
<b>Science Technology Engineering and Mathematics</b>			
Research capacity and capability			
Research capacity: research and training methods involving 'in vivo' techniques	Capacity building awards in integrative mammalian biology	£4M	£8M SFC, BBSRC, MRC, Pfizer and GSK
Research themes include: applied mathematics, materials, sustainability	Research collaboration: Great Western Research	£4M	£10M from RDA, business and HEIs

Chemistry	Additional student numbers	62 ASNs transferred to the Universities of Bath and Bristol = £320k	
Research capacity: chemical engineering and the life sciences, mathematical statistics and nanotechnology	Science and Innovation awards	£7.2M	EPSRC and SFC (funding allocated on project by project basis)
Learning and teaching/demand side work			
Engineering	London Engineering project (The Royal Academy of Engineering)	£2.85M	£3.4M
Centre for Excellence in employer-linked engineering education	CETL	£2.5M over 5 years. £0.94M capital	
Chemistry	Chemistry for our Future (The Royal Society of Chemistry)	£3.6M over 2 years	£1M
Bristol ChemsLabS CETL	CETL	£2.5M over 5 years. £2.35M capital	
Physics	Stimulating Demand for Physics (The Institute of Physics)	£1.7M over 2 years	£0.4M
Centre for Excellence in Innovative Physics Teaching	CETL	£2.5M over 5 years. £1.7M capital	
Institute of Mathematics and its Applications	Increasing the Supply of Mathematical Science Graduates	£3.3M over 3 years	£65k from Institute of Mathematics and its applications, Royal Statistical Society and London Mathematical Society

Centre for Effective Learning in Science (CELS)	CETL	£2.5M over 5 years. £2.35M capital	
<b>Land based studies</b>			
Advancing Skills for Professionals in the Rural Economy	CETL	£1M over 5 years. £0.94M capital	
<b>SIVS: all disciplines</b>			
National and regional SIVS	Additional student numbers: 25,000 FTE places to address strategic priorities for each region	5,273 full time equivalent student places in the sector for STEM subjects for delivery in the period 2006 to 2008 approx £29M	
German, chemistry, physical sciences, Mandarin, Arabic	Open University: delivery of vulnerable subjects in partner HEIs utilising the OU's curriculum and delivery methods	£2.2M	In kind from partner institutions
All SIVS: regional skills needs and economic priorities, in conjunction with the LSC, RDAs and other key stakeholders	Lifelong Learning Networks (LLNs)	£47M committed to date for approximately half of the likely LLNs, plus 2,127 additional student numbers	In kind and funding contributions depending on nature of LLN: HEFCE significant funder
<b>Total</b>		<b>Approximately £160M</b>	<b>At least £50M + contributions in kind</b>

**Potential calls on our resources in support of SIVS (note that proposals to support SIVS will be subject to a critical appraisal by the SDF panel as appropriate)**

<b>Subject area</b>	<b>Likely initiatives</b>	<b>When</b>	<b>Co-funding</b>
Quantitative social science	Research capacity building	TBC but potentially £4-5M	ESRC
STEM	Science and Innovation awards, round 4	TBC, but likely to be in order of £4M	
South Asia and Africa	Area studies and related languages	TBC, but expected to be some £5M	
Land-based studies (Land Based Studies Review)	Depends on recommendations of review (we are assuming, and have told institutions, that no additional funding will accompany the LBSR)	Due December 2006	
Agriculture and land-based industries	National Rural Lifelong Learning Network	In development but, potentially, £3M	
British Computer Society	To be confirmed	TBA	
Nursing research	Potentially following the Finch Review	£3-4M	
Regional skills needs and economic priorities	Lifelong Learning Networks	A number in development	Institutional contributions in kind
<b>Total</b>		<b>Approx £20M</b>	

**Health warnings and notes to the table**

*This table is a snapshot of our activity to support SIVS. It does not include every activity we undertake that supports SIVS, directly or indirectly, such as our support for minority subjects.*

*Only five of the 74 CETLs are listed. Many others directly impact on SIVS or cross disciplines and pedagogic activity that support SIVS. The contribution that CETLs make in support of SIVS will therefore be vastly understated.*

*Only those ASNs allocated to STEM and language subjects are listed. This represents some 5,300 additional places out of a total of 25,000 FTEs that will be allocated in 2006-08 via the strategic or managed growth routes. Many other ASNs will be targeted at regional and national SIVS. The contribution that ASNs make in support of SIVS is therefore understated.*

*LLNs are expected to develop their vocational subject areas, based around regional skills needs and economic priorities, in conjunction with the LSC, RDAs and other key stakeholders. Numbers of LLNs are expected to increase in the coming years as LLN coverage spreads across England. In addition, the 2,127 additional student numbers already committed to LLNs have not been included in total support.*

*Co-funding from partners: this has not discriminated between actual funding committed (for example for the Area Studies and Related Languages initiative), and that committed in kind by partners (such as the Institute of Physics).*

*GDP uplifts have not been included in recurrent funding streams eg for minority subjects.*

*Funding awarded by partners, under the Science and Innovation awards, is calculated on a case by case basis. Exact amounts are unavailable at the time of writing.*

## **Update of the supporting data for the review of strategically important and vulnerable subjects**

67. Table 1 shows an update of the HESA cost centre analysis carried out in HEFCE 2005/24 Annex B. It provides a six year time series (1999-2000 to 2004-05) of undergraduate full-time equivalent (FTE) numbers for home, EU and international students.

68. It is important to note that this table is based upon student numbers in each cost centre, not on individualised qualification aims. Cost centre is determined by the academic department of the member of staff teaching the activity. Therefore where a member of the mathematics department teaches a specific module as part of an engineering course, it will be recorded under the mathematics cost centre rather than the engineering cost centre.

69. This analysis tells us something about the overall volume of activity, not just named programmes, at all levels because it includes credits and modules. It therefore helps us to understand the overall sustainability of teaching in SIVS disciplines at institutional and national levels. And, because it does not involve HESA subject codes, it is a more robust time series than data using individualised HESA data. Subject classifications were changed between 2001-02 and 2002-03 which means that analysis using individualised data over this period will not compare like with like.

70. However, this analysis does not tell us about the number of students studying for qualification aims in particular subjects. Although it shows the trend in the levels of students being taught via the mathematics cost-centre, it will not indicate how many students are studying mathematics in the sector. We are undertaking further analysis of student headcounts using individualised HESA data to further inform our understanding of trends in SIVS disciplines.

71. Additionally, this analysis does not tell us about the health and sustainability of the research base. In view of that, we have worked closely with the Research Councils and the UK's funding councils, through the UK Research Base Funders' Forum, to develop a range of metrics to monitor the strength of disciplines and sub-disciplines in the UK research base. Regular reports consider the supply of academic researchers and the demand from both the public and private sectors. Further details are available at <http://www.rcuk.ac.uk/documents/hod.asp>.

### **UCAS applications**

72. Table 2, on the other hand, considers emerging trends in the potential future demand for SIVS at English universities and colleges. We have examined data, available from UCAS<sup>10</sup>, on applications to study full time at English universities and colleges from any domicile (home, EU and overseas) over the period 2002-03 to 2005-06.

73. Do note, however, that these data consider applicants who apply to study at universities and colleges via UCAS. Those intending to study part time or enter directly are

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<sup>10</sup> <http://wwwucas.ac.uk/figures/ads.html#instsubj>

therefore excluded. Also note that applications will not necessarily translate into acceptances to study particular disciplines at English HEIs, and that not all those who accept will take up their places. Acceptances may also be higher than applications in SIVS disciplines if demand is constrained in popular disciplines (such as medicine): students may then fall back on their second choice subject.

**Table 1: Showing changes in FTE numbers for all undergraduate students by HESA cost centre by fee status 1999-2000 to 2004-05**

Cost centre	Fee status	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	Change	%	Change	%
								1999 to 2004	1999 to 2004	2002 to 2004	2002 to 2004
Agriculture and Forestry	Home FTE	6,162	5,586	6,320	5,878	5,809	5,388	-774	-13%	-490	-8%
	EC FTE	506	451	387	348	288	229	-276	-55%	-119	-34%
	International FTE	141	153	188	188	261	275	134	95%	87	46%
Anatomy and Physiology	Home FTE	6,244	5,437	6,236	6,795	7,674	7,866	1,622	26%	1,071	16%
	EC FTE	209	185	198	223	256	266	57	27%	43	19%
	International FTE	301	257	320	338	417	401	100	33%	64	19%
Archaeology	Home FTE	2,266	2,370	2,493	2,619	2,580	2,567	301	13%	-52	-2%
	EC FTE	59	57	59	55	58	59	0	0%	4	8%
	International FTE	33	36	48	41	45	51	18	55%	10	24%
Architecture, Built Environment and Planning	Home FTE	16,391	16,043	16,211	16,855	17,954	19,890	3,499	21%	3,035	18%
	EC FTE	1,632	1,409	1,227	1,239	1,075	1,359	-273	-17%	120	10%
	International FTE	1,374	1,345	1,452	1,820	1,697	1,824	450	33%	4	0%
Biosciences	Home FTE	37,369	37,869	36,787	36,573	37,623	37,119	-250	-1%	546	1%
	EC FTE	2,150	2,146	1,793	1,534	1,361	1,500	-650	-30%	-34	-2%
	International FTE	1,204	1,181	1,476	1,851	2,222	2,487	1,283	107%	637	34%
Business and Management Studies	Home FTE	87,440	88,111	88,688	90,156	89,645	89,271	1,831	2%	-885	-1%
	EC FTE	6,711	6,905	6,396	6,219	6,134	7,041	330	5%	822	13%
	International FTE	7,310	7,868	9,859	12,523	15,415	17,320	10,010	137%	4,798	38%
Catering and Hospitality Management	Home FTE	7,306	7,260	7,140	8,006	7,986	6,766	-540	-7%	-1,240	-15%
	EC FTE	664	674	605	583	729	748	84	13%	164	28%
	International FTE	434	438	586	1,137	1,352	1,265	831	191%	129	11%
Chemical Engineering	Home FTE	1,953	1,822	1,635	1,544	1,725	1,635	-318	-16%	90	6%
	EC FTE	168	237	108	91	95	113	-55	-33%	22	24%
	International FTE	493	328	490	514	630	728	235	48%	214	42%
Chemistry	Home FTE	11,933	10,959	10,731	9,985	9,530	9,539	-2,393	-20%	-445	-4%
	EC FTE	586	488	374	299	266	287	-299	-51%	-12	-4%
	International FTE	376	370	451	467	553	632	256	68%	165	35%

**Table 1: Showing changes in FTE numbers for all undergraduate students by HESA cost centre by fee status 1999-2000 to 2004-05**

Cost centre	Fee status	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	Change	%	Change	%
								1999 to 2004	1999 to 2004	2002 to 2004	2002 to 2004
Civil Engineering	Home FTE	6,931	6,788	7,088	6,504	6,858	7,383	452	7%	879	14%
	EC FTE	1,380	1,296	1,092	889	674	664	-716	-52%	-225	-25%
	International FTE	1,191	1,021	1,162	1,029	1,079	1,146	-45	-4%	117	11%
Clinical Dentistry	Home FTE	2,511	2,390	2,655	2,726	3,058	3,141	631	25%	416	15%
	EC FTE	53	46	71	86	99	62	9	17%	-24	-28%
	International FTE	144	123	142	162	181	184	40	28%	21	13%
Clinical Medicine	Home FTE	13,812	13,595	15,304	17,510	19,014	20,863	7,051	51%	3,353	19%
	EC FTE	277	322	426	498	553	532	255	92%	35	7%
	International FTE	1,160	1,075	1,181	1,395	1,460	1,588	428	37%	193	14%
Continuing Education	Home FTE	9,554	11,261	12,082	12,332	10,203	8,658	-896	-9%	-3,674	-30%
	EC FTE	300	522	272	392	315	559	259	86%	167	43%
	International FTE	254	85	354	553	387	286	32	13%	-266	-48%
Design and Creative Arts	Home FTE	60,586	64,961	68,130	73,155	74,693	79,183	18,597	31%	6,029	8%
	EC FTE	3,667	3,843	3,583	3,613	3,696	4,282	615	17%	669	19%
	International FTE	3,593	3,788	4,213	4,676	4,845	5,042	1,449	40%	365	8%
Earth, Marine and Environmental Sciences	Home FTE	13,646	13,014	13,157	12,508	12,312	11,990	-1,657	-12%	-518	-4%
	EC FTE	568	581	477	407	398	456	-112	-20%	49	12%
	International FTE	314	353	459	468	507	527	212	67%	58	12%
Education	Home FTE	33,212	33,944	36,758	38,822	42,902	45,154	11,943	36%	6,332	16%
	EC FTE	708	658	616	589	684	628	-81	-11%	39	7%
	International FTE	1,432	1,357	775	855	560	699	-733	-51%	-156	-18%
Electrical, Electronic and Computer Engineering	Home FTE	16,315	17,657	17,730	17,603	17,970	17,445	1,130	7%	-158	-1%
	EC FTE	2,008	2,091	1,749	1,508	1,398	1,343	-666	-33%	-165	-11%
	International FTE	2,514	2,293	3,104	3,530	4,244	4,434	1,920	76%	904	26%
General Engineering	Home FTE	14,472	14,622	14,423	13,791	13,836	12,965	-1,508	-10%	-826	-6%
	EC FTE	1,332	1,326	869	889	729	717	-614	-46%	-172	-19%
	International FTE	1,544	1,914	1,874	2,000	1,749	2,070	527	34%	70	4%

**Table 1: Showing changes in FTE numbers for all undergraduate students by HESA cost centre by fee status 1999-2000 to 2004-05**

Cost centre	Fee status	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	Change 1999 to 2004	%	Change 2002 to 2004	%
									Change 1999 to 2004		Change 2002 to 2004
Geography	Home FTE	13,782	13,470	13,412	13,875	13,513	13,400	-382	-3%	-475	-3%
	EC FTE	306	323	273	283	284	276	-31	-10%	-7	-2%
	International FTE	193	207	210	262	307	285	92	48%	24	9%
Health and Community Studies	Home FTE	20,040	21,685	23,038	25,039	26,338	26,118	6,078	30%	1,079	4%
	EC FTE	485	522	333	314	392	365	-120	-25%	51	16%
	International FTE	219	212	358	369	367	407	188	86%	38	10%
Humanities and Language Based Studies	Home FTE	73,968	71,764	71,548	72,841	74,614	74,355	388	1%	1,515	2%
	EC FTE	3,654	3,414	2,898	2,468	2,390	2,386	-1,269	-35%	-82	-3%
	International FTE	2,104	3,052	3,234	4,089	3,575	3,224	1,120	53%	-865	-21%
IT and Systems Sciences, Computer Software Engineering	Home FTE	52,706	58,319	62,300	66,076	59,113	53,732	1,026	2%	-12,345	-19%
	EC FTE	2,690	2,625	2,596	2,541	2,215	2,197	-493	-18%	-343	-14%
	International FTE	2,804	3,851	5,179	6,694	6,972	6,180	3,376	120%	-514	-8%
Mathematics	Home FTE	19,161	18,625	18,442	17,314	16,611	17,028	-2,133	-11%	-286	-2%
	EC FTE	1,054	1,042	810	729	653	897	-156	-15%	169	23%
	International FTE	1,567	1,622	1,957	2,392	2,987	3,403	1,836	117%	1,011	42%
Mechanical, Aero and Production Engineering	Home FTE	16,254	16,387	16,655	16,630	16,091	15,082	-1,172	-7%	-1,548	-9%
	EC FTE	2,195	1,998	1,603	1,505	1,354	1,397	-798	-36%	-109	-7%
	International FTE	1,969	1,653	1,924	2,105	2,406	2,567	598	30%	462	22%
Media Studies	Home FTE	17,961	18,624	22,304	24,627	27,892	27,449	9,488	53%	2,822	11%
	EC FTE	1,182	1,205	1,265	1,177	1,404	1,354	172	15%	177	15%
	International FTE	684	758	921	1,086	1,309	1,346	663	97%	261	24%
Mineral, Metallurgy and Materials Engineering	Home FTE	2,857	2,770	2,503	2,525	2,427	2,582	-275	-10%	57	2%
	EC FTE	249	281	170	172	150	137	-112	-45%	-35	-21%
	International FTE	351	307	345	467	512	548	196	56%	80	17%
Modern Languages	Home FTE	21,754	23,042	24,273	23,910	22,888	23,361	1,607	7%	-549	-2%
	EC FTE	2,279	2,440	2,416	2,204	2,158	2,238	-41	-2%	33	2%

**Table 1: Showing changes in FTE numbers for all undergraduate students by HESA cost centre by fee status 1999-2000 to 2004-05**

Cost centre	Fee status	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	Change	%	Change	%
								1999 to 2004	1999 to 2004	2002 to 2004	2002 to 2004
	International FTE	820	910	1,054	1,322	1,666	1,287	467	57%	-36	-3%
Nursing and Paramedical Studies	Home FTE	72,373	78,424	84,832	89,156	91,904	97,464	25,091	35%	8,308	9%
	EC FTE	3,792	3,965	3,890	3,603	2,989	2,894	-898	-24%	-709	-20%
	International FTE	2,371	1,527	2,175	2,338	2,193	1,838	-533	-22%	-500	-21%
Pharmacy and Pharmacology	Home FTE	5,718	6,805	7,053	7,190	7,442	8,345	2,627	46%	1,155	16%
	EC FTE	428	539	501	482	494	557	128	30%	75	16%
	International FTE	522	564	630	784	839	1,058	536	103%	274	35%
Physics	Home FTE	8,581	8,257	8,328	8,463	8,666	8,566	-15	0%	102	1%
	EC FTE	462	416	325	322	328	368	-95	-20%	46	14%
	International FTE	297	283	305	368	432	403	105	35%	35	10%
Psychology and Behavioural Sciences	Home FTE	22,340	22,302	23,885	25,678	28,882	30,744	8,404	38%	5,066	20%
	EC FTE	1,293	1,315	1,150	1,070	1,042	1,143	-150	-12%	73	7%
	International FTE	622	620	699	814	996	1,042	420	68%	228	28%
Social Studies	Home FTE	82,320	81,543	83,526	87,160	90,736	94,256	11,937	15%	7,096	8%
	EC FTE	5,724	5,652	5,332	4,865	4,785	5,297	-427	-7%	432	9%
	International FTE	6,564	6,830	7,523	9,178	10,174	10,435	3,871	59%	1,257	14%
Sports Science and Leisure Studies	Home FTE	13,721	14,609	16,084	17,443	17,746	18,720	4,999	36%	1,277	7%
	EC FTE	403	397	355	434	340	410	7	2%	-24	-6%
	International FTE	151	170	186	192	210	217	66	44%	25	13%
Veterinary Science	Home FTE	1,384	1,162	1,673	1,771	2,033	2,202	818	59%	431	24%
	EC FTE	21	11	20	25	30	35	15	72%	11	44%
	International FTE	198	170	205	187	143	110	-88	-45%	-77	-41%
Cost centre unassignable	Home FTE	534	739	223	330	200	429	-105	-20%	99	30%
	EC FTE	27	33	27	35	27	31	4	15%	-5	-13%
	International FTE	9	39	34	71	63	54	45	487%	-17	-24%

Table 1 notes: The Open University has been excluded to be consistent with HEFCE 2005/24

## **Further information on data source: HESA cost centre time series**

### Update of data from HEFCE 2005/24

74. The definitions for these data are the same as for HEFCE 2005/24 Table 1 Annex B. However it is important to reiterate the following features of the data:

- a. The analysis is restricted to students that are included in Column 4 of each respective HESES re-creation.
- b. The figures do not include data for HEFCE-recognised consortia members.
- c. It excludes Open University students due to inconsistencies in the way data were returned in the period being examined.
- d. Due to amendments to the main student datasets made since the previous tables were published, FTE numbers in 2002-03 and 2003-04 do not match exactly with those published in the equivalent table in the supporting data (Annex B) to HEFCE 2005/24.
- e. There has been a change in the cost centre groupings, and so the updated table does not correspond directly to the previously produced table in all subject groups and labels.
- f. It is important to note that cost centre is determined by the academic department of the member of staff teaching the activity. Therefore where a member of the mathematics department teaches a specific module as part of an engineering course, it will be recorded under the mathematics cost centre rather than the engineering cost centre.
- g. Where pockets of disparate or lower cost activities exist, to save the costs of identifying, monitoring and reporting income and expenditure separately for a small group of staff, we allow these to be grouped together when returning cost centre data. This is acceptable only where the numbers are small (less than 20 FTE academic staff), and do not seriously distort the statistics (academic staff do not make up more than 20 per cent of the cost centre they are joining). See paragraph 4, Annex B of Circular letter 32/2005 for more detail.