



Higher level learning

**Universities and employers
working together**



Universities UK



This publication is a timely reminder of the innovative ways in which universities are providing skilled graduates for all sections of the economy. Working with employers is key to this; as the HE sector begins to operate in a competitive market, employer-led provision will enable delivery of the skills that the labour market needs, and that students want. It will also enable the development of a more diverse range of provision, as this publication by Universities UK demonstrates.

Rt Hon Alan Johnson MP
Secretary of State
for Education and Skills

Contents

Chapter 1
Plugging into the computer industry
p2

Chapter 2
Trading on financial services
p5

Chapter 3
Connecting with small businesses
p8

Chapter 4
Getting creative with media and fashion
p11

Chapter 5
Developing the public and voluntary sectors
p15

Chapter 6
Enhancing graduates' employability
p18

Chapter 7
Big players in the sport and leisure industry
p21

Chapter 8
Laying solid foundations for the future
p24

Chapter 9
Nurturing new businesses
p26



The global economy is rapidly evolving and if the UK is to retain its position as the fifth largest economy in the world we need highly-skilled graduates who are able to respond to these developments.

Universities are taking up the challenge of embedding employability skills and entrepreneurship within the curriculum, while more and more businesses are engaging with universities, which offer a rich source of new ideas and talent. These initiatives, and others like them, need to be celebrated and encouraged.

Employers are committed to communicating their skills needs effectively to the HE sector at all levels, and working together to design and deliver qualifications and training to meet those needs. This publication is welcome evidence of some of the innovative ways in which this is happening.

Richard Lambert
Director-General
Confederation of British Industry



Introduction

Universities play a key role in the UK economy, generating over £45 billion of output a year. They are now a larger part of the economy than either the UK pharmaceutical industry or the aircraft industry.

A major part of their contribution, of course, comes in the form of the 260,000 or so graduates who enter the world of work each year. It's therefore vital that our universities produce the graduates that our economy needs, with the skills that employers value. **Higher level learning: universities and employers working together** showcases the extent to which universities are working with employers to do just that.

The case studies in this publication feature some 26 universities who are at the forefront of developing new business-focused degrees, or who are enhancing their graduates' employability in innovative ways. The range of industries covered includes financial services, computing, media and fashion, the public sector, construction, and sport and leisure. We also show how universities connect with small or medium-sized enterprises (SMEs) and provide entrepreneurial expertise wherever it is needed.

Of course this is just a single snapshot of the outcomes and benefits of genuine collaboration between business and the higher education sector. For every university featured here, there are many more working to enhance the employability of their graduates through employer-driven programmes.

Some of the case studies may surprise the reader – and it's true that many of the degrees offered today were unheard of a few decades ago. But if our graduates are to take their place in the global economy, it is right that there should be a range of courses on offer to ensure a workforce with diverse, and in some cases very specific, skills. An industry such as the sports industry, for instance, worth £9.8 billion a year, needs graduates with all the critical thinking, entrepreneurial attitude and business skills that the degrees featured here demonstrate. In degree terms, that's not so much 'Mickey Mouse' as the 'Mouse that Roared'.

And while all the evidence indicates the economy needs more graduates, employers are telling universities it's quality, not quantity, which counts. They want people with the generic employability skills of team working and problem solving, they want communicators and creative thinkers. While universities already nurture these skills, giving them a business context is a vital next step. As **Higher level learning** shows, this is well underway.

Professor Drummond Bone
President, Universities UK

The software, computer games and electronic publishing sector in the UK is worth more than £65 billion a year to the national economy. The sector employs almost 875,000 people in about 50,000 companies, and is growing rapidly; averaging 11% a year from 1997 to 2003. In terms of scale and employees, this sector is now five times bigger than the TV and radio industries.

Leading companies want graduates in all disciplines with computing skills who can hit the ground running when they start their careers. Universities have responded to this by teaming up with major employers and companies to make sure their courses fit employers' needs.

The wealth of new courses in computer gaming is an example of this pragmatic university sector response to a worldwide shortage of 3D programmers.

UCAS currently lists 76 degree-level courses in games design, 52 in games technology, 38 in games production and seven each in video games and video games design, offered by institutions all over the country.

Facts and figures

1

Worth to the economy:
£65.5 billion (2003)

2

Number of people employed:
875,000 (2004)

3

Number of graduates:
424,000 graduate level jobs
in 2004

4

**Projected demand for
graduates in the future:**
by 2014, 531,000 graduate
level jobs

5

Projected growth:
employment set to rise by over
20% from 2004 to 2014

1

Plugging into the computer industry



Hands-on experience with American Express

The first students graduated in February 2006 from two IT and work experience based masters degrees, run jointly by American Express and the University of Sussex.

Whilst on the course, students work part-time, earning a competitive salary and gaining commercial experience on assignments and research projects in the IT field, assisting senior staff at American Express.

The new MSc offers an unrivalled package of part-time postgraduate study combined with unique hands-on experience in IT in the financial services sector. The company plans to offer a number of permanent positions to graduates from either of the two-year masters degrees in Information Technology for E-Commerce, and Human Centred Computer Systems.

The 'e-skilled' graduates

The University of Greenwich's new Information Technology Management for Business BSc (Hons) degree aims to produce graduates with a blend of IT expertise, business acumen and personal skills.

The course has been designed to meet the requirements set out by the 'e-skills UK' consortium of companies including BT, Dell, Ford, Computer Associates, Hewlett Packard, Fujitsu, IBM, Morgan Stanley, Norwich Union and Lehman Brothers.

'Graduates will be equipped to transition more quickly and effectively into business life, and companies will gain employees who can make a bigger contribution from day one', said Helen Tovey, Ford Motor's IT Competency and Learning Manager. 'This programme offers an excellent mix of business and technology skills development, with a focus on the practical application of technology in today's business environment. Because it is delivered jointly by the education and the corporate sector, the content of the programme is very relevant.'

Currently in their first year, Greenwich students have been working with BT Wholesale to consider the impact of the split of the BT businesses on the provision of BT's Broadband internet for customers.

The degree is also offered at the University of Northumbria and the University of Central England.

More than just games playing

Given the worldwide demand for well-trained, highly skilled computer games programmers, career opportunities open to graduates from Abertay Dundee's bachelors degree in Computer Games Technology are virtually limitless.

Abertay first considered developing a course in the mid 1990s to meet the demand for skilled graduates from Dundee's burgeoning computer games industry. It was the first university in the world to offer both masters and undergraduate courses in computer games technology.

Since then, several hundred students have graduated from computer games degrees at Abertay, and in many cases students have been recruited direct from a course before they've completed it. Potential students are required to have BBC grades at A-level (including Mathematics at A-level or AS-level).

The degree tackles the academic fundamentals of the subject, but also explores how practitioners will fit into the industry. Students don't spend all their time studying code and hardware – they also get involved in discussion of markets and trends – 'future-proofing' their knowledge.

Graduates have been employed as games, graphics and network programmers, from creating games for handheld devices to programming console games on a variety of platforms.

The university works closely with leading game developers such as Real Time Worlds, Electronic Arts, Visual Sciences, Sony Europe and Denki.

Universities are equipping graduates with sound financial acumen to slot them straight into the world of financial services. Dedicated courses in stock market trading, accountancy and information and records management all offer students the opportunity to get first-hand experience of the business world whilst studying.

A number of universities have partnered with accountancy specialists to provide fast-track training.

A chartered accountancy qualification can be used as a platform for any business career, whether working in industry, the public sector, or management consultancy and education. Fast-tracking allows students to gain work experience and take professional qualifications at the same time.

Elsewhere, universities have teamed up with employers to prepare economics students for the increasingly complex world of the investment markets by giving them hands-on experience of their future careers.

Facts and figures

- 1
Worth to the economy:
£310.9 billion (2003)
- 2
Number of people employed:
1.162 million (2004)
- 3
Number of graduates:
399,000 graduate level jobs
(2004)
- 4
Projected demand for
graduates in the future:
by 2014, 451,000 graduate
level jobs
- 5
Projected growth:
not expected to grow
substantially, but healthy
replacement demand

2 Trading on financial services



left
Cass business school,
City University

Business degrees for the City

Cass Business School is City University's business school – but it sees itself as the business school for the City of London.

Over 1,200 students are enrolled at the school on the 24 specialist masters programmes – the largest group of such courses in Europe. They cover banking, asset management and quantitative finance; property valuation and investment; and management in financial services and the charity sector.

About 30% of students go on to work in 'traditional' financial services positions such as analysts or auditors.

But the courses provide a springboard for all industry sectors. Graduates from the masters course in Management, for example, are working in the media, financial services, government, as well as consulting and marketing companies. Many of these students found their first job from the research they did on their final project, which can be traditional dissertation or work placement.

Businesses such as American Express, EasyGroup, PriceWaterhouseCoopers and Deloitte have come to the school for consultancy services or to commission research.

Many of the courses are presented by practitioners from such companies, some of whom recruit students as a result.

Going the distance with the European Central Bank

The University of Northumbria at Newcastle has secured a contract with the European Central Bank (ECB) in Germany, which allows ECB staff in Frankfurt to study remotely for a BSc degree in Information and Records Management.

The distance-learning programme, which is run by Northumbria's School of Computing, Engineering and Information Sciences, is undertaken at the ECB's headquarters in Frankfurt. The programme is delivered to a group of newly appointed records management specialists electronically and supported by face-to-face workshops in Frankfurt.

The degree will produce graduates with a critical understanding of the record-keeping needs of organisations and of contemporary records management systems and services.

The curriculum is designed to provide a vocationally relevant curriculum for students forging a career in a public, private or voluntary sector records, document or archives service.



left
Emma Judge, Head of Graduate Recruitment, Ernst & Young UK with placement students from Lancaster

In partnership with accountancy professionals

Graduates of the Ernst & Young degree at Lancaster University qualify a year early as chartered accountants due to the work placements undertaken throughout their course. Students join one of the UK offices for a term in years two and four, as well as for the whole of year three.

Ernst & Young supports students during the bachelors degree in Accounting, Auditing and Finance programme at Lancaster, through direct contact and visits with the firm, first-year bursaries and a series of salaried placements.

'Ernst & Young has long been interested in working with students to help them develop business and commercial knowledge as well as key professional skills during their time at university', said Emma Judge, Senior Manager, Ernst & Young National Graduate Recruitment. 'The Ernst & Young degree was a natural extension and allows EY to directly participate in, and support, the experience of talented students. By working with the firm during their placements, students will make a direct contribution to the business.'

The degree was designed by Ernst & Young, the five-star research rated Lancaster University Management School and the Institute of Chartered Accountants of Scotland. Students need at least two As and a B at A-level to be accepted.

The programme at Lancaster follows a similar pattern to that first established by Newcastle University with its BA (Honours) Business Accounting and Finance, which is run in conjunction with PricewaterhouseCoopers and the Institute of Chartered Accountants in England and Wales (ICAEW).

This four-year programme has been offered since 2002 and its first intake graduated this year. The programme offers students the chance to complete the Professional Stage of the ICAEW examinations while at university. In addition there are paid work placements in years two, three and four. Students benefit from a package of pastoral and financial support and can qualify as chartered accountants around 12 months after graduation.

Rob Jones, Director of Studies for the programme, comments: 'The University, PricewaterhouseCoopers and the ICAEW have worked together closely to plan and deliver the programme using a range of innovative teaching approaches. The programme is designed to integrate the classroom teaching with practical placement experience and this helps students to understand and absorb new ideas; we think this works for our students'.

How do you apply academic thinking directly to the world of work?

Universities have answered this question by partnering talented students with local businesses, by offering the businesses specialist knowledge and letting the students apply their theory.

Whilst it is not possible to tailor specific degrees to each company due to their size, this significant section of the economy is nevertheless supported in many innovative ways.

Many schemes between universities and local small businesses have developed in environmental goods and services, biotechnology, software and the tourism sector.

Facts and figures

1

Over 99.8% of the 4 million active businesses in the UK are small or medium-sized enterprises (SMEs)

2

Annual turnover for SMEs: £1,283,075 million

3

27.9% of those who graduated in 2003 and who were working in the UK were employed in SMEs

4

A report from the Government's futures programme (Foresight), predicted that the number of SMEs in the UK will reach 4.5 million by 2010, creating two million new jobs, many of which will be for graduates

3

Connecting with small businesses



above
Kent's IT Clinic helping local business

right
Salford's 'Let's Bounce' network bouncing ideas off each other



Bouncing ideas

NetworkNorthWest grew out of a realisation that standard training approaches to developing innovation skills in SMEs were largely ineffectual. Funded by the North West Development Agency, the two-year programme ran from 2003 to 2005. Led by the University of Salford, and delivered through six university partners across the region, it energised 118 SMEs to share ideas and learn elements of best practice from all over the world.

The 'Let's Bounce' network model was based on an action-learning process pioneered at the University of Salford, and provided an extremely effective forum for busy SME managers to 'bounce' their ideas off each other.

At the end of the scheme the ideas generated were combined with other examples of international good practice to create a comprehensive set of learning and facilitation resources. Participants found the average increase in business efficiency was 24.4%.

Maria Vargacz of North Star Design decided, as a result of her participation, to expand her business with an e-commerce arm. She said: 'I'd recommend action-learning to anyone – they'll be amazed how much they'll get from it'.

Clinical experience

Students at the University of Kent IT Clinic (KITC) act as consultants for local businesses. Launched in 2005, the IT Clinic offers competitively priced support to small businesses, as well as open-access training.

David Soud, Kent IT Clinic Co-ordinator, said: 'We help clients by adding value to their business, and our consultants have the opportunity to gain valuable experience'.

In the Clinic's first year, 19 students became consultants before graduation. One student said: 'Working at the Clinic has proved invaluable experience on my CV'.

Following his consultancy work for Rochester Cathedral one student has been nominated under the category of best student project in the 2006 *Computing Magazine's* awards.

The Clinic has already helped several local companies, including Eurogears Ltd, whose Operations Manager, Anthony Piekos said: 'KITC provided an excellent service with a professional approach. The system they installed will reduce our engineers' communication costs drastically when they are visiting our Dubai office, allowing us to maintain contact with partners abroad'.

Investing in new ideas

How do you make PhDs more useful?
And how do you get small businesses to do more research?

According to the Office of National Statistics, Wales currently has the lowest number of R&D workers in the private sector of any UK region and there are fewer PhD students. A scheme at the University of Wales, Bangor aims to kickstart research careers while strengthening the region's R&D base, by recruiting 50 postgraduate researchers to work on new projects with small local companies in North West Wales. The university won just over £2 million from the European Union's European Social Fund through the West Wales and the Valleys Objective 1 Programme, which is administered through the Welsh Assembly Government.

Small businesses and the university jointly identify a research project that is relevant, original and which would also be of use to local commerce or industry. A student is attached to a company for three years, working on site for at least one month a year. The majority of the partnerships developed have been with companies employing less than 10 people in the environmental goods and services, biotechnology, chemical, aquaculture, software, professional and health services and tourism sectors.

Richard Sheppard, MD of software company, Draig Technology Ltd, explains the benefit to his company: 'Although this is work we could have undertaken ourselves, the time constraints of running a small business would have made it hard to do so. Our attachment student's research has allowed us to market ourselves more efficiently, target relevant organisations with particular campaigns and improve upon weak points of customer service'.

Research partnership boosts international trade

Acoustic cleaning company Primasonics boosted its international trade as a result of a technology transfer partnership with the University of Liverpool.

Knowledge Transfer Partnerships Programmes (KTPs) aim to improve the company's competitiveness; enhance the graduate's career; and enable academic experts to make their work more relevant to business needs. The postgraduate placed with Primasonics became the company's technical director, he also gained an Institute of Acoustics postgraduate diploma in Acoustics and Noise Control.

Primasonics provides acoustic cleaning services for the petrochemicals, construction and food industries in more than 30 countries and turns over £350,00 annually.

Acoustic cleaning uses a sonic horn to vibrate dirt off large surfaces such as flour silos and electrostatic plates at power stations.

The company could not prove that the vibrations from the horns did not damage the structures being cleaned, so sales were limited until the partnership with the university.

Primasonics MD Donald Cameron said: 'The KTP programme was able to give us the proof we needed. This increased our technical credibility 1,000% because it was underwritten by the University of Liverpool's expertise. We could drive sales much more effectively and have gained many new customers in various markets around the world'.

About one third of all people employed in the creative industries in the UK are graduates. Universities have a long history of nurturing creative people and helping their creativity to grow. But in today's competitive climate, simply letting these people excel in their creative discipline is no longer enough to enable them to survive in the world of work.

By working with the creative industries, universities are helping students to be more employable on graduation. They offer courses that provide the specialists they produce not only with a sound academic background, but also a knowledge of the history and technical aspects of their professions. In many cases the university will help by providing work experience, or offering a showcase to employers.

Facts and figures

- 1
Worth to the economy:
£90 billion (2003)
- 2
Number of people employed:
4.04 million (2004)
- 3
Number of graduates:
1.3 million (2004)
- 4
Projected demand for
graduates in the future:
by 2014, 1.58 million at
graduate level
- 5
Projected growth:
expected to grow by about
8% in terms of employment,
from 2004 to 2014

4

Getting creative with media and fashion

Mastery of sound

The University of Surrey's 'Tonmeister' degree produces highly skilled graduates in sound engineering. Tonmeister in German means 'sound' – or 'tone' – master; someone who combines a knowledge of the principles of audio with an equally extensive knowledge of music.

Graduates have embarked on a wide range of careers: at sound studios, such as the famous Abbey Road; or in audio maintenance, software writing, post production work, or audio product support (for example at Dolby labs).

The Tonmeister course assumes that all first-year students have a reasonable level of musical performance ability, and good theoretical knowledge and understanding of mathematics, music and physics. They therefore require good A-level passes in those three subjects (typically AAB), and ideally a pass at Grade 7 or 8 (Associated Board of the Royal Schools of Music (ABRSM), Trinity or Guildhall) in musical performance.

The third year of the four-year Tonmeister degree is spent working for an audio company or organisation. Work placements are offered at Abbey Road Studios, BBC Scotland, Anvil Post production, and Blair Music Production.

The Tonmeister Programme was set up in the late 1960s. At the time it was anticipated that the sound recording industry could support eight new graduates per year working in classical music or broadcasting. Since then, the industry has expanded – TV, radio, film, popular music recording, internet audio – and the Tonmeister Programme has evolved to meet these new needs; by 1999 it was admitting 24 students per year, and from 2006 will admit 36.

Perhaps it's no coincidence that the South-East of England has one of the highest concentrations of top quality audio recording facilities in the world.



above
Rebecca Gatrell – Music and Sound Recording (Tonmeister) student. Rebecca now works as a film music supervisor



Fashion's one-stop shop

The Fashion Business Resource Studio at the London College of Fashion acts as a one-stop shop for the fashion industry and taps into the creative, business and technical expertise among the College's academics and students. It was established to build relationships with the fast-paced fashion industry and offers creative development with a strong vocational slant.

The College was formed in 1906 in response to industry demands for workers trained in ladies' tailoring, dressmaking, hairdressing, beauty and millinery.

One hundred years on, the College, now part of the University of the Arts London, continues to nurture talent in areas ranging from footwear and menswear design, makeup for film, to fashion buying and styling. The Studio hosts industry advisory boards, industry-led curriculum-based projects, work placements and larger strategic projects in which academic experts work with industry.

It has also launched FashionAIM – an online alumni/industry matching portfolio service for students about to enter the workplace.



above
Students at the University of the Arts London's College of Fashion

right
George Davies
after a masterclass
at Heriot-Watt



Sweet smell of success

Graduates from London Metropolitan University's BSc degree course in Cosmetic Science develop careers in the cosmetics industry in areas such as research, marketing and technical sales.

The course requires students to have at least 160 points from two or more A-levels, including chemistry, and was developed in consultation with global cosmetics company Elizabeth Arden to provide the scientific and technical background required for a career in the development and manufacture of cosmetic and toiletry products.

The course focuses on cosmetic product formulation, understanding of the principles of cosmetics and related sciences whilst developing skills of critical analysis and research methodology. It also looks at the underlying marketing, management and manufacturing principles and practical applications associated with the cosmetics industry.

The next big thing

Postgraduate students on Heriot-Watt University's International Design Marketing (Fashion and Textiles) course receive masterclasses from the man who founded Next, and launched successful clothing ranges at Asda and Marks & Spencer. Retail fashion guru George Davies helped design the masters course at the George Davies Centre for Retail Excellence.

The centre provides students with training in the whole retail fashion business. Subjects include buying and merchandising, strategic retail management, understanding the fashion consumer, fashion brand management and retail logistics.

Dr Davies said: 'This opportunity is unique in that it combines real life retailing with an academic course for young professionals who want to develop their careers in the industry. It is an investment in the future of the industry in this country, and a means of developing new talent and expertise to meet the challenges of a competitive global economy'.

The first 16 students on the one-year course were enrolled in 2005. John Fernie, professor of retail marketing, and head of Heriot-Watt's School of Management and Languages, said: 'It is effectively an MBA for the fashion world'.

Facts and figures

1

Worth to the economy:
share of Government spending
is 45.2% of GDP (2006)

2

Number of people employed:
5.882 million (2005)

3

Number of graduates:
2.27 million (2005)

4

**Projected demand for
graduates in the future:**
plans to cut public sector jobs,
but demand for graduates
likely to remain high

Almost six million people work in the UK's public sector and about one third of these are graduates. Employers recognise that a course of study can add enormous value to a future or current employee, so are teaming up with universities to offer flexible courses that prepare students for working life, or enhance their workers' skills and knowledge.

Degree courses in partnership with the police force and St John Ambulance are two such courses helping to develop the UK's public sector: by helping to modernise the police force and giving volunteers the opportunity to gain an academic qualification.

5

Developing the public and voluntary sectors



A foundation for the voluntary sector

The University of Derby's Voluntary Sector foundation degree, developed with St John Ambulance, prepares students to provide first aid, transport and care to those in need. Developed in response to requirements at the charity, the course allows students to evaluate and improve the way the organisation goes about its work in Derbyshire.

The two-year degree is a work-based qualification, which involves distance learning via the internet, with some classroom-based sessions. Additional sessions are provided by St John Ambulance senior volunteers and staff.

St John Ambulance in Derbyshire had identified a staff development need following an internal review. The university programme was designed alongside the St John internal staff development structure to recognise qualifications received internally, whilst developing skills required within the organisation.

Students study modules on personal and professional development, managing change in the voluntary sector, developing young adults, health and safety, mentoring, and motivating staff.

Professor David Gray, Head of the School of Culture and Lifestyle, said: 'Students can also carry out a research project based in the organisation within which they work, and act as a thinktank resource that the County Commander and his team can use to investigate and evaluate issues'.

Of the initial cohort of 14 students who completed the course in December 2005, 11 have progressed to the final year of a bachelors degree at the university.

above
Derbyshire St John Ambulance volunteers and staff celebrate the successful completion of their foundation degree

right
Police foundation degree students Paul Faulkner, Shane Kyme and Yvonne Gamesby

Keeping to the beat

The University of Teesside's foundation degrees in policing aim to help professionalise the police force as part of Government reforms.

The degrees have been developed in partnership with Cleveland Police and West Mercia Constabulary, to meet the differing needs of the two forces.

Each degree develops the students as individuals, equipping them with both professional and academic skills. Classroom work links with the outside world, an example being the students' examination of the Police and Criminal Evidence Act. Police law lecturers in the university tell the students how they can use the Act, while academic lecturers describe its history, putting the Act into context.

During the second year of the degree, Cleveland Police trainee officers go 'on the beat' but return to the university for several weeks. In June 2006, Cleveland Police had 150 student officers on the course. By January 2007, West Mercia Police will have 120 student officers on the programme.



The programme aims to produce 'fully rounded' police officers, who understand the bigger picture of both what is going on in their communities and nationally.

A Cleveland Police spokesman said: 'Officers spend equal time within the university and force, training in the communities they will eventually police, and are assessed on both their academic and practical skills. Subjects taught include law, criminology and forensics. The university has a 16-room crime scene laboratory on campus, where crime scenes are simulated, allowing students to undertake forensic investigations'.

After completing the degrees, graduates can progress to the final year of the university's bachelors degree in Investigative Studies. This combines psychology, law, fraud, criminology and forensic science in its exploration of how the investigative process is carried out.

Universities recognise that in a globally competitive market, their graduates need to get a job. Schemes to achieve this include giving business advice after graduating, and giving support on how to apply for and get the first job or work placement. Developing strong links with different industries is key.

These schemes are working: latest figures for destinations of graduates reveal that 63% of the 188,000 university leavers in 2005 were in employment six months after graduating. A further 8% were in a combination of work and study; 16% were involved in further study; and only 7% were assumed to be unemployed.

Figures from England and Scotland also show graduates earning between 45 to 50% more than those educated to A-level or equivalent with a median starting salary £17,697 a year.

Facts and figures

- 1 Over 80% of graduates in appropriate jobs within four years of graduation – as managers, senior officials, professionals
- 2 Four years after graduation only 15% of employed graduates remained in non-graduate jobs, despite almost half of graduates initially entering employment in non-graduate jobs
- 3 Median graduate starting salary is £17,697
- 4 Only 3.2% of men and 2% of women were unemployed and seeking work four years after graduation, (compared to the national unemployment figure of 5.5 %)

6 Enhancing graduates' employability

Embedding Employability in the Curriculum

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Introduction

'Working Out? Placement & Career Skills' was a new module introduced at Aberdeen University in 2004-05. The module aims to provide increased support and guidance to help level III Molecular & Cell Biology students secure a year long industrial placement and provides undergraduate students in their penultimate year with essential careers information. The module covers the necessary skills to complete placement applications by exploring CV preparation, writing covering letters, completing application forms, skill identification and good interview techniques. The module is a prerequisite for all students wishing to undertake an industrial placement year and is strongly recommended as part of career development for all other Molecular & Cell Biology students. The aim is to help

students get the most from a placement and also to aid their career planning. Students are not guaranteed a placement by completing the module but material covered during the module will assist undergraduates to submit high quality placement applications and

perform well during an interview to maximise their chances of success. The module runs for twelve-weeks and is taught jointly by the School of Medical Sciences and the Careers & Appointments Service. The module provides an example of how an existing curriculum may be 'tuned' in order to enhance students' employability.

Frequently Asked Questions (FAQs)

What does the teaching programme cover?
 The module consists of twelve one hour sessions. The curriculum is presented in Figure 1. A part of each scheduled teaching session is also dedicated to promoting current placement opportunities and providing application advice.

What was the rationale for introducing the module?

The module was introduced to extol the benefits of work experience to students and to enhance graduate employability. Prior to the introduction of the module only a small proportion of students (approx. 10%) secured a year long industrial placement.

In what context does the module take place?

Students that secure a placement during level III spend the fourth year of their degree on placement and then return to University to complete the fifth and final year of their degree programme. During 2004-05, approximately 50% of students registered for the module secured a placement.



Where are the placements located?

Placements are secured locally, throughout the UK and abroad.

How is the module assessed?

The module is assessed on coursework only. The assignments require the completion of an application form (60%) and writing a covering letter (40%).

How has this module promoted employability?

The module promotes the value of work experience to students. Following the module students are more aware of general employment skills and how to market themselves effectively to potential employers. Comments from students that have completed the module include:

- 'Interview simulations are a great idea' (Student Course Evaluation Form quote 2004-5)
- 'external speakers and previous placement student presentations were really useful' (Student Course Evaluation Form quote 2004-5).



above
 Leaflet answering students' employability questions at the University of Aberdeen

Promoting work placements

A new module on work experience has helped biology students at the University of Aberdeen to secure work placements.

'Working out? Placement and Career Skills' is a credit-bearing module that provides sessions in preparing CVs, how to write covering letters for job applications, and interview technique skills for students studying molecular biosciences. The course developers had been aware of the students' poor job application skills and the need to promote the value of work experience. The proportion of students securing placements boomed, increasing from 10 to 50% after the first course was offered to students.

External speakers, such as BP, give sessions on personnel recruitment and selection processes. Students learn what employers are looking for from graduates – transferable skills such as numeracy, computing, group work and time management.

Students go into industry for a year during the fourth year of their course before returning to the university for a final year. As a direct result of the student placements, the university has developed stronger links with industry.



top
Emma Killilea closely inspecting one of her luxury cake bars

above
Gluten free ginger sponge

Hatching business ideas

Emma Killilea founded her Delicious Alchemy business with support provided by the Hatchery, a business incubator for students run by Sheffield Hallam University.

The business produces luxury cake bars free from gluten, lactose and genetically modified ingredients, and uses innovative packaging to keep them fresh.

The Food Marketing Management graduate from Sheffield Hallam has been accepted on to the High Growth Start-Up programme, run by the regional development agency in Yorkshire. The business has also been signed up by the Deliciouslyorkshire brand, which celebrates good food and drink from the region. The next development of the business will be a new website, allowing customers to buy 'free-from' foods online.

The Hatchery is one half of a two-pronged approach to improve the employability of students at Sheffield Hallam.

Up to 30 entrepreneurs can sign up to the incubator at any one time – accessing free hot-desk and computer points as well as specialist advisers.

Meanwhile, the university has also established an 'e-team' to help academics make their lectures more useful in terms of preparing students for the workplace.

Each e-team member has a business background, combined with experience in the development of the curriculum of degree courses.

The university has also forged a partnership with the Sheffield Chamber of Commerce, which provides a membership and development scheme to Sheffield Hallam students. The programme is currently in its pilot stage, with nine students signed up. The link-up gives them access to business opportunities and a mentor to support them in developing their business skills.

The sport and leisure industry has not been traditionally associated with the world of education. However, the industry is growing fast, most recently due to the UK's successful Olympic bid for 2012. Employers will require an influx of people to respond to this and the general growth of the sector, and over 70% of new demand is expected to be at a graduate level. Modern sports courses are academically rigorous; they consider the science and psychology behind the sport, as well as the practicalities of how to play the game.

Graduates from sports courses go on to work in product design, teaching or coaching, occupational health or start their own company.

Facts and figures

1

Worth to the economy:
£9.8 billion (2000)

2

Number of people employed:
621,000

3

Number of graduates:
53,000

4

Projected demand for
graduates in the future:
over 70% of new demand is
expected to be managerial
and professional

5

Projected growth:
employment of about
750,000 by 2008, with
growth consisting
mainly of new graduates

7

Big players in the sport and leisure industry

right
Sports Equipment
Design student
Graham Patrick with
his prototype equipment
for a brand new sport
called Xtreme Ice

Designer sports

The University of Salford first considered a Sports Equipment Design degree after being approached by companies across the region looking for graduates with specific skills tailored to the sports industry.

The sports industry is increasingly seeking designers who can contribute to their product development processes. It wants people who know about sport and who understand product design. The bachelors degree programme was the first of its kind in the UK and allows students to study a combination of design, business and sport.

Manchester, the host city for the 2002 Commonwealth Games, has a major sports industry, including professional football and rugby clubs, a velodrome, aquatics centre, and companies such as Adidas, Umbro, and Reebok.

Industry advisers were involved in shaping the course content and also act as external examiners for the course. Industry sponsors are involved with placements and provide guest lecturers.

Companies benefit as graduates are equipped with practical design skills for the sports equipment industry, and understand business demands through the study of material technology, sports science, design and business environments. About 15 students graduate each year and gain positions in the industry.

Course graduate, Ben Barlow, said, 'The learning process was always focused on an end product that would be suitable for business and industry. These practical, real life learning experiences helped me to get my current job designing sportswear at Kukri'.



A hole in one

Students competing for places on the University of Birmingham's Applied Golf Management Studies degree need at least two Bs and one C grade at A-level – and a golf handicap of 4.4 for men and 6.4 for women.

Located 15 miles away from the Belfry golf course, the course produces future coaches and managers for a game that boasts five million players across the country, and is estimated to be worth £4 billion to the economy.

Established in partnership with the Professional Golfer's Association, the degree combines applied academic and theoretical aspects of sport management and sports science related to golf, with vocational aspects of the game.

In 2006 there were 82 applicants for 23 places with enquiries from the United States, Australia, Thailand, Japan, Belgium, Germany, Russia and France.

right
Testing the correct temperature of the beer

far right
Surf Science student testing the theory



Something brewing

The International Centre for Brewing and Distilling, based at Heriot-Watt University, has been educating people in the skills of brewing and distilling for over 100 years. Since its creation the centre has had intimate links with the brewing, malting and distilling industries, with representatives sitting on the centre's educational board and giving lectures in the bachelors and masters degrees on offer.

Each year 15 students enrol on the four-year degree course in Brewing and Distilling. The course is designed to educate potential managers of the malting, brewing and distilling industries and to provide a full understanding of the science and technology of the processes involved. Graduates are exempt from the first professional examinations of the Institute and Guild of Brewing.

Employment rates within the first six months of graduation for the past three years have been 88%, 100% and 87% and there are frequent contacts from companies looking for their graduates to fill their vacancies.

At any given point, there are also about 14 PhD students at the centre carrying out brewing and distilling research.

Making waves

The University of Plymouth's degree in Surf Science and Technology prepares future managers for the world's lively surfing industry – as well as other professions. Students learn the eclectic skills required to run small businesses in this field or play a role in one of the commercial giants in the sector. Graduates are able to make sense of a balance sheet, devise a marketing plan, understand the dynamics of surfing performance, and have an in-depth knowledge of the environment in which surf recreation takes place.

The British Surfing Association estimates that there are around 180,000 regular surfers in the UK. Surf tourism is now a major contributor to the economy in the South-West. Forty-eight companies and organisations contributed to the market research that helped to formulate the university's course.

The surf industry's most successful companies, such as Billabong and Quiksilver, are now worth billions of pounds.

As part of their third year, students work in teams to develop and market products and services. This culminates in a trade show where the ideas are launched. Some of the concepts which began here have been adopted by industry while others have been taken further by the students themselves after graduating.

Facts and figures

1

**Worth to the economy:
8% of the UK GDP**

2

**Number of people employed:
2.133 million (2006)**

3

**Number of graduates:
239,000 managers,
129,320 engineering, IT
and other professionals,
and 28,240 civil engineers
and other associated
professionals**

4

**Projected demand for
graduates in the future:
36,400 'white-collar'
workers every year for
the next five years**

5

**Projected growth:
will need 348,000 recruits
by 2010**

The UK construction industry consists of over 250,000 firms which employ 2.1 million people, but there is a national skills shortage and lack of new entrants. The buoyant property market also has a high demand for graduate level entrants.

Universities have developed courses that aim to address this industry need; teaming up with employers to assess what skills new entrants require, providing the property professionals of the future.

Courses offered include construction design and management, civil engineering, building studies, building surveying and property valuation.

8

Laying solid foundations for the future



above
Sammy Cheung
supervising Building
Studies students
Keith Grant
and Chris Owen

Responding to the demand for civil engineers

From managing the environmental impact of major construction projects to reclaiming contaminated land, the demand for civil engineers has never been greater. Civil engineers design and build large structures – the physical infrastructure needed for water, power, and transportation.

The masters degree at the University of Southampton is helping to meet this demand, offering students a year in industry as part of the course. It also means that graduates become chartered engineers earlier in their careers. The course is accredited by the Institution of Civil Engineers and has received initial funding from the university's EPSRC-funded collaborative training account.

Sponsors of students include the Environment Agency, Clancy Docwra, Bovis Lend Lease Limited, Dorset Engineering Consultancy, Geoffrey Osborne Ltd, Gifford Consulting Engineers, John Sisk and Sons Ltd and Ringway Group Ltd.

Peter Doran, an official from the Environment Agency, said: 'We need to recruit and develop people with civil engineering skills for the future. We see this programme as a way of encouraging ambitious graduate engineers to obtain the higher qualification of MSc, which will accelerate their progress towards becoming chartered engineers'.

Building skills

The University of Wolverhampton's Construction Management degree prepares students for key management roles within the modern construction team – whose job is to plan, co-ordinate, monitor and control the activities on major construction projects.

The course, accredited by the Chartered Institute of Building, is helping to address the national shortage of skilled labour in the sector and the lack of people entering the industry.

Students learn about project management, while studying economics, cost accounting and computer systems. Information technology is increasingly important for managers working on site and in the office, so building up skills in this area is vital.

Many students are home-based and there is a steady demand for construction graduates from regional and national employers. Companies such as Carillion, Laing O'Rourke, Persimmon Homes and Interclass Construction have all recruited Wolverhampton graduates.

The School of Engineering and the Built Environment's Industry Board Panel fosters closer links between the university, its industrial partners and influential external bodies (both public and private sector) and gives input and feedback on the course curriculum.

University education is increasingly equipping the entrepreneurs of tomorrow with the real-world skills they need to do business globally.

All over the country, universities are inspiring their students to go out and do it themselves. Through a mix of learning methods, often with the mentorship of business people or experts at the university, students and graduates are given help to make their business dreams a reality.

Facts and figures

- 1
Of the 1.9 million students in HE, those engaged in enterprise account for 7% of all students in English HEIs
- 2
59% of English universities have an entrepreneurship 'champion'
- 3
44% of English universities have a dedicated centre for students, with 45% providing funds for start-ups
- 4
44% of English universities have an explicit enterprise policy

9

Nurturing new businesses

right

Richard Ortoli, a New York lawyer and President of Blue Dragon Ltd, meets a student start-up masseuse during an enterprise masterclass



White Rose blooming

Students and academic staff at the universities of Sheffield, Leeds and York are learning entrepreneurial skills thanks to the White Rose Centre for Excellence in Teaching and Learning of Enterprise. At the heart of the initiative is the belief that business thinking should be a core aspect of degree courses rather than an afterthought.

Surveys have shown that 4% of Leeds students are already running their own businesses; another 27% of students say they will start a business in the next five years. These Government-funded centres, opening before the end of 2006, will continue to raise awareness of 'enterprise' generally and support students who see this as a career option, with the additional aim of spreading enterprise teaching from subjects such as science and engineering to other fields including the social sciences, arts, humanities, and medicine.

A major part of the Centre's work takes place in three custom-built enterprise zones and eight satellite zones. These house 'micro incubators' – with the space and facilities to support any number of student start-up companies.

Network for budding entrepreneurs

Beepurple, the University of Brighton's entrepreneurship network, aims to stimulate, inform and develop entrepreneurship among students, staff and alumni.

'Bee purple' was discovered by the scientist Karl von Frisch, who found that bees find the right flowers to make their honey because they see a colour humans can't. The name Beepurple refers to the fact that entrepreneurs see opportunities others don't.

The scheme provides monthly workshops and masterclasses. It also helps to broker work placements, organises events bringing businesses and the university together, and supports members' applications for courses, competitions and scholarships.

Beepurple provides intensive training in business communication skills. Attendees include undergraduates, postgraduates, medics, university technicians, librarians, MBA course leaders and lecturers, and university administrators. Over 150 students and just under 90 staff took part in Beepurple events during the 2005/06 academic year.

Over 254 business people from the Brighton and Sussex area have been involved with the activities since February 2005.

Business multi-millionaires explain about their failures before their successes, and how long real life 'overnight' success can take. These are challenging concepts to convey in textbooks, but have enormous impact when explained face-to-face.

below

Lesley Anne Black and her team receiving a £25,000 innovation award for their Di@log project

Promoting entrepreneurship

The Northern Ireland Centre for Entrepreneurship, a partnership between the University of Ulster and Queen's University of Belfast, aims to instil a new culture of entrepreneurship in the local community.

The Northern Ireland economy is the fourth strongest of the UK's 12 regional economies but the province also has one of the poorest records in the UK for business start-ups. A report in 2005 placed Northern Ireland tenth out of the UK's 12 regions in terms of its entrepreneurial activities – citing a fear of failure and debt as the main barriers.

The centre's primary focus is to embed the spirit of entrepreneurship in the science, engineering and technology departments in universities in Northern Ireland.

The centre has developed a partnership with Babson College in Boston, one of the leading centres for entrepreneurship in the United States. One of the main lessons has been to recruit teams of academics from different disciplines working with business people who have become champions for the scheme.

During the last 18 months, young researchers at the two universities have also been targeted, as it is from this group that new ideas for businesses are likely to come. The centre has introduced the concept of entrepreneurship to over 7,500 students since it was first established in 2000.



Photo credits

p1
Geoff Wilson

p3
University of Sussex

p6
City University

p7
Lancaster University

p9
University of Kent
University of Salford

p12
University of Surrey

p13
University of the Arts London

p14
Heriot-Watt University

p16
University of Derby

p17
University of Teesside

p19
University of Aberdeen

p20
Emma Killilea

p22
University of Salford

p23
Heriot-Watt University
University of Plymouth

p25
University of Wolverhampton

p27
University of Leeds

p28
University of Ulster

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p5: 3, 4 and 5
p11: 2, 3, 4 and 5
p15: 4 and 5
p21: 4 and 5

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p5: 1
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p18: 3

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p21: 2

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Thanks to Dr Charlie Ball,
Labour Market Analyst
at Prospects for sourcing
these statistics.

This report was written by
Dr Lee Elliot-Major

About Universities UK

This publication has been produced by Universities UK, which is the representative body for the executive heads of UK universities and is recognised as the umbrella group for the university sector. It works to advance the interests of universities and to spread good practice throughout the higher education sector.

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© Universities UK
ISBN 1 84036 140 X
November 2006



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