



# Student Employability Profiles

## A Guide for Employers



## Degrees of skill

*Bianca Kubler  
and Peter Forbes*



*"This guide will help employers better appreciate the range of capabilities modern graduates offer. Businesses might not have thought of recruiting future managers from certain disciplines. Now they have the information they need. We have been delighted to have worked with the HE Academy Subject Centres on this issue."*

Richard Brown, Chief Executive, **CIHE**

## **ACKNOWLEDGEMENTS**

We would like to thank the Higher Education Academy and its Subject Network with whom we worked to develop student employability profiles for use with their academic communities. These aim to raise awareness on employability issues and to make accessible and transparent the skills that underlie a course of study in the disciplines noted here. These student employability profiles form the basis on which this employer version was developed.

The 12 members of the Higher Education Academy Subject Network who have been involved are:

*BEST - Business, Management and Accountancy  
Built Environment  
Economics  
Engineering  
English  
Geography, Earth and Environmental Sciences  
Health Sciences and Practice  
Materials  
Mathematics, Statistics and OR  
Philosophical and Religious Studies  
Physical Sciences  
Psychology*

The steering group comprised Peter Knight, ESECT, Val Butcher, The Higher Education Academy and Barbara Blake, The Council for Industry and Higher Education (CIHE).

We are grateful to the recruitment professionals and other representatives from the employment sector who provided valuable input and who comprised AIESEC, BAe Systems, The Engineering Technology Board, e-skills UK, ExxonMobil, HSBC, LogicaCMG, Network Rail and PriceWaterhouseCoopers (PwC).

In compiling the profiles, we drew on the subject benchmark statements © developed and maintained by UK higher education academic subject associations communities with copyright by the Quality Assurance Agency for Higher Education (QAA). We also took account of the input from the CIHE employer membership regarding competencies, skills and attributes they valued when recruiting. This information was gathered during the first phase of this work in 2002/3 and further details can be found on the CIHE website.

*'Graduate recruiters often get caught in a trap of recruiting graduates from particular degree courses. By highlighting the competencies delivered by different subject areas, the guide gives employers access to a greater diversity of potential candidates. Business requirements can be fulfilled more effectively, with a potential boost to the bottom line as a result.'*

Mike Hill, Chief Executive, **Graduate Prospects**



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# Student Employability Profiles

## A Guide for Employers

### FOREWORD

This guide has been written by Bianca Kubler and Peter Forbes of Employability Works who both have extensive experience in graduate selection and development. It was written for The Council For Industry and Higher Education (CIHE) with support from Graduate Prospects and cooperation from the Higher Education Academy and its Subject Network.

**The Council for Industry and Higher Education** is a partnership between leaders from a wide range of businesses, universities and colleges. Its mission is to advance all kinds of learning through the fostering of mutual understanding, cooperation and support between Higher Education and business.

CIHE leads in developing an agreed agenda on the learning issues that affect our global competitiveness, social cohesion and individual development, commissioning research so that policy can be better based on evidence, debating our agenda and research with Government and its agencies, and working with them and other organisations to effect change.

**Graduate Prospects** works in partnership with the most prominent official bodies in higher education, It has been bringing students, graduates and recruiters together for over 30 years. Graduate Prospects works in partnership with the Association of Graduate Careers Advisory Services (AGCAS) to maximise the opportunities and support available to all students and graduates throughout their career search.

*"It is a good time to be a graduate and the skills they can offer employers are often much wider than some realise. Although many graduates have been studying degrees in specific subject areas - sometimes linked to their future career, sometimes involving non vocational courses - these profiles show that graduates from quite different disciplines are developing a wide range of competencies that are highly relevant to employers needs. I congratulate CIHE for drawing this information together into this very useful guide for employers".*

Dr Kim Howells, MP  
Minister of State for Lifelong Learning (FE and HE)

## Student Employability Profiles

### A Guide for Employers

#### INTRODUCTION

*“... the Student Employability Profiles are an important step forward in promoting better shared understanding of the content of different degree disciplines. As a graduate recruiter, I have already used the profiles to improve my knowledge of the skills sets and experiences that a graduate might expect to gain from various degrees, helping me to cast the net wider when looking for new graduate talent for our company.”*

Gary Argent, UK Graduate Recruitment Manager, **LogicaCMG**

The CIHE with Graduate Prospects has commissioned this guide to raise awareness amongst employers of the employability skills that are developed through the study of a wide range of academic subjects. We hope this information will help you as an employer better to understand the skills that should be developed during the learning process in specific disciplines and in turn help you to recruit from a wider range of academic backgrounds.

A better informed selection process can result in more effective matching of the knowledge, skills, attributes and abilities of candidates to role requirements. Improved selection means a better fit against requirements and hence quicker achievement of the performance sought and improved graduate retention. People who are matched well with their jobs are more productive, better motivated, perform better and are therefore more valuable to an organisation from the start of employment. A better fit also helps in strategic HR planning, assessment and performance management and training and development for graduate entry jobs.

For employers that need new graduate recruits to perform effectively early in their careers, (particularly important for small to medium enterprises), this guide helps show the value a graduate can bring to an organisation straightaway and enables a recruiter to focus during an interview on the skills a graduate can evidence.

More than 34% of the UK's 18-21 year olds experience higher education, with an increasing number taking Foundation Degrees. There are over 1 million full time students and 53,500 undergraduate courses. Making sense of the graduate output of this very large pool of talent is a challenge for employers.

Students of all disciplines are increasingly developing highly marketable, work related skills during their higher education, skills of tangible and immediate value to employers. Such skills are acquired through academic supported learning within the structures of degree courses as well as through work experience and extra curricular activities. Increasingly universities are working to help their students better understand and articulate the skills they have. This guide helps make explicit what has often been implicit.

*“Employers value generic employability skills above specific occupational skills. This applies to employers in large, medium and small sized businesses both in the public and private sector. Specific job skills are less crucial for entry level employment.”*

**Natriello 1989, Heal 1993**

## WHAT ARE STUDENT EMPLOYABILITY PROFILES?

Each profile identifies a set of work related skills that can be developed from studying a particular subject. Each gives a description of the subject as an academic discipline and some commentary on the value of the skills in employment.

The skills identified are drawn from the subject benchmark statements © created by the Quality Assurance Agency for Higher Education (QAA) and adopted by members of the Higher Education Academy Subject Network. They have been written by groups that include academics, practitioners and representatives of relevant professional and/or statutory regulatory bodies, and are designed to state the general academic standards of UK honours degrees. They also describe the attributes, skills and capabilities that a graduate with an honours degree would be expected to have. For further information go to: [www.qaa.ac.uk/students/UnderstandCourses.htm](http://www.qaa.ac.uk/students/UnderstandCourses.htm)

The profiles do not offer a definitive list of subject related skills and knowledge and, of course, individual students will have their own set of skills and knowledge but their subject profile should help them to better articulate and evidence to prospective employers the skills they bring to the workplace.

### The subjects covered by this guide are:

Accountancy	Health Visiting
Architecture	Materials
Building and Surveying	Mathematics, Statistics and OR
Business and Management	Midwifery
Chemistry	Nursing
Earth Science/Geology/Geoscience	Pharmacy
Economics	Philosophy
Engineering	Physics
English	Planning
Environmental Science	Psychology
Geography	Religious Studies
Health Studies	

## USE OF CHARTS

For each subject discipline there is a chart that looks at the emphases placed in the relevant QAA subject benchmark statement on employability skills, and how these skills map against the employability competencies identified by members of the CIHE Employers' Policy Forum. These competencies have been described as attributes that are the key components observed in individuals that add value and help transform organisations early in their careers. The charts have been created to offer an easy reference for depicting this information and in no way are intended to suggest any conclusions beyond this specific aspect. The CIHE takes no responsibility for conclusions derived from the information by third parties.

## CIHE EMPLOYABILITY COMPETENCIES

Evidence of a graduate's work related skills can be mapped by a recruiter against the competencies required by their organisation.

CIHE Employers' Policy Forum members have identified a set of competencies that, whilst not all encompassing, in their view are the key components observed in individuals that add value and help transform organisations.

Those employers that have their own set of competencies for graduate entry level roles may wish to consider the CIHE competencies for comparison. There are many employers that don't have their own set of competencies and the CIHE competencies might aid recruitment. The competencies are:

### 1. Cognitive Skills

The ability to identify, analyse and solve problems, work with information and handle a mass of diverse data, assess risk and draw conclusions. (*Analysis, Attention to detail, Judgement*).

### 2. Generic Competencies

High level and transferable key skills such as the ability to work with others in a team, communication skills, listening & questioning, written communication, influencing, planning and organising, having interpersonal sensitivity. (*Image, Influencing, Interpersonal sensitivity, Listening, Organisational sensitivity, Planning and organising, Questioning, Teamwork/Working with others, Written Communication*).

### 3. Personal Capabilities

The ability and desire to learn for oneself and improve ones self-awareness – life long learning philosophy, emotional intelligence and performance. To be a self-starter and to finish the job (*Achievement orientation, Adaptability/Flexibility, Creativity, Decisiveness, Initiative, Leadership and tolerance of stress*).

### 4. Technical Ability

For example, having the knowledge and experience of working with relevant modern technology. The ability to apply and exploit information technology (*Technical application, Technical knowledge*).

### 5. Business and/or Organisation Awareness

Having an appreciation of how businesses operate through having had (preferably relevant) work experience. Appreciation of organisational culture, policies and processes through organisational understanding and sensitivity. Ability to understand basic financial and commercial principles (*Commercial awareness, Financial awareness, Organisation understanding*).

### 6. Practical and Professional Elements

The critical evaluation of the outcomes of professional practice, reflecting and reviewing own practice on an ongoing basis. Practice continuous professional development and expertise and project a positive, strong professional image at all times. Participate in and review quality control processes and risk management (*Life long learning and development, Personal development, Process operation, Professional expertise*).



## ACCOUNTANCY

A graduate in Accountancy typically will:

- *Be able to critically evaluate arguments and evidence.*
- *Be able to analyse and draw reasoned conclusions concerning structured and unstructured problems from both given data and data that must be acquired.*
- *Be able to locate, extract and analyse data from multiple sources.*
- *Self manage their learning.*
- *Be numerate, including being able to manipulate financial and other numerical data and to appreciate statistical concepts.*
- *Be effective in ICT including using spreadsheets, word processing software and online databases.*
- *Be able to present quantitative and qualitative information, together with analysis, argument and commentary, in a form appropriate to the intended audience.*
- *Have effective interpersonal skills, including the ability to work in teams.*
- *Understanding the contexts in which accounting operates including the legal and social environment, the accountancy profession, the business entity, the capital markets and the public sector.*
- *Understand the current technical language and practices of accounting (for example, recognition, measurement and disclosure in financial statements, managerial accounting, auditing, taxation) in a specified field.*
- *Understand some of the alternative technical language and practices of accounting (for example, alternative recognition rules and valuation bases, accounting rules followed in other socio-economic domains, alternative managerial accounting approaches to control and decision making).*
- *Be skilled in recording and summarising transactions and other economic events, preparing financial statements, analysing the operations of business (for example, decision analysis, performance measurement and management control), financial analysis and projections (for example, analysis of financial ratios, discounted cash flow analysis, budgeting, financial risks).*

Accountancy is concerned with the provision and analysis of information for a variety of decision-making, accountability, managerial, regulatory, and resource allocation purposes. It is practised, in part, within a professional service context. The study of accounting involves the consideration of conceptual and applied aspects, including at least some of the theoretical considerations underlying the subject.

Students are required to study how the design, operation and validation of accounting systems affects, and is affected by, individuals, organisations, markets and society. Such perspectives may include the behavioural, the economic, the political, and the sociological. In everyday speech, 'finance' is often used synonymously with 'accounting' whereas, in accounting and in economics, finance is restricted to the science or study of the management of funds. Some students will pursue a professional accountancy qualification on graduation. Others consider the subject to be a useful introduction to the worlds of business and finance. Some students study accounting predominantly as an intellectual pursuit.



## ARCHITECTURE

A graduate in Architecture typically will have the ability to:

- *Work in an interdisciplinary environment and collaborate with others.*
- *Respond to a broad range of interests including social and ethical concerns.*
- *Communicate effectively using visual, graphic, written and verbal means.*
- *Work autonomously in a self-directed manner, thereby developing the practices of reflection and of lifelong learning.*
- *Work in teams.*
- *Manage time and work to deadlines.*
- *Use digital and electronic communication techniques.*
- *Analyse problems and use innovation, logical and lateral thinking in their solution.*
- *Be flexible and adaptable in approaching an issue, problem or opportunity.*

The discipline of architecture draws on knowledge and skills from the sciences, humanities, and fine and applied arts. It addresses the accommodation of all human activity in all places under all conditions, understanding our place within differing physical, historical, cultural, social, political and virtual environments. Architecture proposes, forms, and transforms our built environment and does so through engaging with the spaces, buildings, cities and landscapes in which we live. Design is the core activity of architectural study. The contested nature of design provokes debate, encourages diversity and advances the subject.

Students come from numerous backgrounds, bringing the very diversity of disciplines and modes of inquiry that an architecture course instils. Architectural education is part of the construction industry and has an important influence on how this industry changes and develops. The knowledge, understanding and skills developed during the study of architecture are broad, holistic and of value in themselves. Most undergraduates aim ultimately for professional accreditation or a related career.

Other employability related skills that can be developed include the ability to:

- Conceptualise, investigate and develop the design of three-dimensional objects and spaces.
- Create architectural designs that integrate social, aesthetic and technical requirements.
- Conceive architectural designs on a specific site in the context of urban planning.
- Research, formulate and respond to programmes or briefs appropriate to specific contexts and circumstances.
- Form considered judgements about the spatial, aesthetic, technical and social qualities of a design within the scope and scale of a wider environment.
- Reflect upon and then relate ideas to a design and to the work of others.
- Produce designs that demonstrate the integrative relationship of structure, building materials and constructional elements and the relationship between climate, service systems and energy supply.
- Exercise informed and reflective judgement in the development of sustainable design.
- Use a range of visual, written and verbal techniques to communicate architectural designs and ideas.
- Select and use design using design-based software and multimedia applications.
- Listen and engage in informed dialogue.

## BUILDING AND SURVEYING

A graduate in Building and Surveying typically will have the ability to:

- *Analyse by critically evaluating arguments and evidence.*
- *Manipulate data from multiple sources.*
- *Problem solve and draw on evidence and so exercise judgement.*
- *Use IT, statistical and quantitative resources.*
- *Present quantitative and qualitative information appropriately.*
- *Self manage their learning.*
- *Work effectively in a team.*
- *Communicate including through the use of IT.*
- *Research and acquire knowledge using appropriate methods.*
- *Encourage leadership, effective group dynamics and self development.*
- *Summarise legal and other documents.*
- *Evaluate all relevant aspects of management and other specialisms taking account of regulations, the needs of society and ethical correctness.*

Building and surveying provides and analyses information relating to urban, rural and marine resources and improvements including buildings and infrastructure. Degree programmes are multi disciplinary with a substantive area of specialist or technical knowledge associated with specified learning outcomes, which may include a broad preparation for initial employment.

Undergraduates study a diversity of subjects and learn how to integrate the knowledge acquired to identify and solve problems, to implement solutions relating to the ownership, investment in, and the use, development, management, maintenance, improvement of land, buildings or estates/portfolios of land and buildings in the context of identifiable physical, urban, rural or maritime parameters.

Degree programmes tend to be identified with a specific specialist area such as building, building design, building surveying, services engineering, construction management, land/property management (including property/real estate finance, investment and portfolio management), hydrography and land surveying, environment and minerals, planning and development, quantity surveying and construction economics, residential or commercial property, rural practice, marine resource management, project management, recreation/leisure management, and facilities management.

## BUSINESS AND MANAGEMENT

A graduate in Business and Management typically will:

- *Be able to demonstrate understanding of organisations, the external environment in which they operate, how they are managed and the future needs of organisations.*
- *Have skills in critical thinking analysis and synthesis, including being able to identify assumptions, evaluate statements, detect false logic, identify implicit values, define terms adequately and generalise appropriately.*
- *Be effective at problem solving and decision making, using appropriate quantitative and qualitative skills and also be able to create, evaluate and assess options, together with being able to apply ideas and knowledge to a range of situations.*
- *Be effective in communication, using ICT and a range of media widely used in business, for example, business reports.*
- *Have numeracy and quantitative skills including modelling and data analysis, interpretation and extrapolation.*
- *Self manage their time, behaviour, motivation, initiative and enterprise.*
- *Have an appetite for reflective, adaptive and collaborative learning.*
- *Be self aware, sensitive and open to the diversity of people, cultures, business and management issues.*
- *Have leadership, team building, influencing and project management skills.*
- *Be effective at listening, negotiating and persuasion.*
- *Be able to research business and management issues.*
- *Be able to address issues at European and international levels.*

General business and management degree programmes focus on the study of organisations, their management and the changing external environment in which they operate, preparation for and development of a career in business and management and enhancement of lifelong learning skills and personal development to contribute to society at large.

These degree programmes provide broad, analytical and integrated study of business and management. It is expected that graduates can demonstrate knowledge and understanding of markets, customers, finance, people, operations, information systems, ICT and business policy and strategy as well as contemporary and pervasive issues such as innovation, e-commerce, enterprise, knowledge management, sustainability, globalisation and business ethics.

## CHEMISTRY

A graduate in Chemistry typically will have the ability to:

- *Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to chemistry.*
- *Apply such knowledge and understanding to the solution of qualitative and quantitative problems of a familiar and unfamiliar nature.*
- *Recognise and analyse novel problems and plan strategies for their solution.*
- *Evaluate, interpret and synthesize chemical information and data.*
- *Recognise and implement good measurement science and practice.*
- *Present scientific material and arguments clearly and correctly, in writing and orally, to a range of audiences.*
- *Apply computational and data-processing skills relating to chemistry.*
- *Handle chemical materials safely, taking into account their physical and chemical properties, including any specific hazards associated with their use.*
- *Conduct standard laboratory procedures involved in synthetic and analytical work, in relation to both inorganic and organic systems.*
- *Monitor and systematically record, chemical properties, events or changes.*
- *Plan, design and execute practical investigations, from the problem-recognition stage through to the evaluation and appraisal of results and findings; this to include the ability to select appropriate techniques and procedures.*
- *Operate standard chemical instrumentation such as that used for structural investigations and separation.*
- *Interpret data derived from laboratory observations and measurements.*
- *Conduct risk assessments concerning the use of chemical substances and laboratory procedures.*
- *Apply problem-solving skills relating to qualitative and quantitative information, extending to evaluations based on limited information.*
- *Apply numeracy and computational skills, including error analysis, order-of-magnitude estimations, correct use of units and modes of data presentation.*
- *Apply information-retrieval skills including through on-line computer searches.*
- *Apply IT skills such as word-processing and spreadsheet use, data-logging and storage, internet communication.*
- *Exercise written and oral communication skills plus interpersonal skills and engage in team-working.*
- *Apply time-management and organisational skills.*
- *Apply study skills needed for continuing professional development*

Undergraduate courses can cover chemical terminology, chemical reaction, chemical analysis, the different states of matter, quantum mechanics, thermodynamics, the kinetics of chemical change, structural investigations, the properties of elements and their compounds, organic chemistry, the relation between bulk properties and atoms and molecules, including macromolecules. Typical aims are to instil a sense of enthusiasm for chemistry and an appreciation of its application in different contexts, to give students a foundation in chemical knowledge and practical skills, and to develop in students a range of transferable skills of value in a wide range of employment.

## EARTH SCIENCE/GEOLOGY/GEOSCIENCE

Earth Scientists possess the following skills and qualities:

*Communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.*

More specifically a typical earth scientist:

- *Has knowledge of the issues regarding the exploitation and conservation of natural resources, leading to an understanding of the natural environment at all scales.*
- *Can think in an integrated and holistic way and appreciate complexity and change.*
- *Can think flexibly between different spatial representations and timescales.*
- *Is capable of decision making based on limited information.*
- *Has project management capability including planning, execution and evaluation, using skills such as time management, risk assessment and problem solving and analysis.*
- *Has well developed numeracy, graphicacy, image processing and ICT skills.*
- *Flexibility and adaptability including the ability to deal with the unexpected.*

Earth Science is the study of past and present processes operating in the solid earth, its waters and the atmosphere. It includes the scientific study of physical, chemical and biological processes, the history of the earth over geological timescales, and the structure and composition of the earth and other planets. Earth scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

Earth Science promotes an awareness of the dual context of the subject in society, namely that of providing knowledge and understanding for both the exploitation and the conservation of the earth's resources. The subject overlaps with others such as environmental sciences, environmental studies, biology, chemistry, civil engineering, geography, mathematics, mining engineering, petroleum engineering and physics.

Earth Science graduates have a strong track record in gaining employment both within related industries and across a number of different professions and organisations. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Earth Science are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and in unfamiliar environments, are common skills to Earth Scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

## ECONOMICS

A graduate in economics typically will have the ability to:

- *Abstract and simplify in order to identify and model the essence of a problem.*
- *Analyse and reason - both deductively and inductively.*
- *Marshal evidence and to assimilate, structure, and analyse qualitative and quantitative data.*
- *Communicate concisely results to a wide audience, including those with no training in economics.*
- *Think critically about the limits of one's analysis in a broader socio-economic context.*
- *Draw economic policy inferences and to recognise the potential constraints in their implementation.*
- *Apply literary and information-processing skills, as well as interpersonal skills such as communication.*

Economics is the study of the factors that influence income, wealth and well-being. From this, economics seeks to inform the design and implementation of economic policy. Its aim is to analyse and understand the allocation, distribution and utilisation of scarce resources. Study of economics requires an understanding of how resources are used and how households and businesses behave and interact. The analysis deals with output, employment, income, trade and finance and also with innovation, technical progress, economic growth and business cycles.

Economics engages with other subjects such as psychology, politics, sociology, anthropology, geography, history and law. It uses mathematics and statistics and is engaging increasingly with biology, environmental science and medicine. It is one of the central disciplines underpinning the study of business and management and related areas.

A single honours degree in economics normally comprises a coherent core of economic principles that cover issues of decision and choice, the production and exchange of goods, the interdependency of markets, and economic welfare. Also included are issues such as employment, national income, the balance of payments and the distribution of income, inflation, growth and business cycles, money and finance.

Skills particularly valued in studying economics include abstraction, analysis, deduction and induction, quantification and design, framing, opportunity cost, incentives, equilibrium, disequilibrium and stability, strategic thinking, expectations and surprises, and the relevance of marginal considerations. An economist also has numeracy and presentation skills.

Economics provides significant employment opportunities in a variety of careers in addition to working as a professional economist.



## ENGINEERING

A graduate in Engineering typically will have the ability to:

- *Understand essential facts, concepts, principles and theories relevant to their chosen specialist engineering discipline, and understand the constraints in which their judgement will have to be exercised.*
- *Have a sound grasp of science, mathematics and the technological base relevant to their discipline. It is desirable that all students have some knowledge and understanding of business and management techniques.*
- *Understand their professional and ethical responsibilities, the impact of engineering solutions in a global and societal context, and be aware of contemporary issues.*
- *Be creative, analytical and innovative in solving problems and in designing systems, components and processes. They must be able to apply the appropriate tools from mathematics, science and technology, coupling these with professional 'know-how'.*
- *Solve engineering problems, often based on limited information.*
- *Analyse and interpret data and, when necessary, design experiments to gain new data; design a system, component or process to meet a need.*
- *Evaluate designs, processes and products and make improvements.*
- *Maintain a sound theoretical approach in enabling the introduction of new and advancing technology to enhance current practice.*
- *Take a holistic approach, applying professional judgements, balancing costs, benefits, safety, quality, reliability, appearance and environmental impact.*
- *Assess risks and take appropriate steps to manage those risks.*
- *Use a wide range of tools, techniques and equipment, including pertinent software: use laboratory and workshop equipment to generate valuable data.*
- *Develop, promote and apply safe systems of work.*
- *Communicate effectively with colleagues and others.*
- *Use IT effectively.*
- *Manage resources and time and work in a multi-disciplinary team.*
- *Undertake lifelong learning, particularly for continuing professional development.*
- *Be self-disciplined and self-motivated; of an enquiring mind, eager for new knowledge and understanding.*
- *Enthusiastic in applying their knowledge and skills in the practice of engineering.*

Engineering is about the application of the understanding, knowledge, skills and know-how of scientific, mathematical and technological principles in a business context to achieve an economic solution.

*“Engineering is a profession directed towards the skilled application of a distinctive body of knowledge based on mathematics, science and technology, integrated with business and management, which is acquired through education and professional formation in a particular engineering discipline. Engineering is directed to developing, providing and maintaining infrastructure, goods and services for industry and the community.”*

QAA benchmark statement



**ENGLISH**

A graduate in English typically will have the ability to:

- *Communicate effectively using advanced literacy and communication.*
- *Apply written and oral arguments appropriately, cogently and persuasively.*
- *Analyse and critically examine diverse forms of verbal and textual communication.*
- *Adapt and transfer critical methods to a variety of working environments.*
- *Acquire substantial quantities of complex information of diverse kinds in a structured and systematic way, involving the subject's distinctive interpretative skills.*
- *Plan and execute essays, reports and project work.*
- *Exercise independent thought, judgement, and skills in critical reasoning.*
- *Comprehend and develop intricate concepts in an open ended way that involves an understanding of aims and consequences.*
- *Exercise interpersonal sensitivity when working with and in relation to others through the presentation of ideas and information and the collective negotiation of solutions.*
- *Use judgement so as to understand, interrogate and apply a variety of theoretical positions and weigh the importance of alternative perspectives.*
- *Handle information and argument in a critical and self reflective manner.*

English is a versatile academic discipline characterised by the rigorous and critical study of literature and language. It is concerned with the production, reception and interpretation of written texts, both literary and non-literary; and with the nature, history and potential of the English language. The study of English develops a flexible and responsive openness of mind, conceptual sophistication in argument, and the ability to engage in dialogue with past and present cultures and values.

Methods of critical reading taught on English courses take account of the form, structure and rhetoric of texts, their social provenance, the cultures of which they are a part and in which they intervene, and their treatment of ideas and material shared with other subject areas. Students study the inter-relationships between literary texts and they may also consider the relationships between literature, other media and other forms of artistic production. The study of the English language embraces diverse modes of communication, oral, written and mixed, and their distinctive levels of phonology, grammar, lexis, semantics and pragmatics. English is often shared with other subjects as part of combined or joint honours programmes and students are increasingly taking modules in creative writing. Graduates in English possess skills in written and spoken communication, working independently and thinking critically.

All English graduates are expected to be aware of the production and determination of meaning by historical, social, political, stylistic, ethnic, gender, geographical and other contexts.

## ENVIRONMENTAL SCIENCE

Environmental scientists possess the following skills and qualities:

*Communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.*

More specifically a typical environmental scientist has:

- *Knowledge of natural and human induced environmental changes.*
- *An interdisciplinary approach to the awareness of environmental problems.*
- *Global awareness and an understanding of earth systems, sustainability and conservation.*
- *The ability to think and make decisions in an integrated and holistic way and to work with complexity and change.*
- *The ability to develop arguments from many points of view including scientific, philosophical and ethical perspectives.*
- *Project management capability including planning, execution and evaluation, involving time management, risk assessment, problem solving and analytical skills.*
- *Well developed literacy, numeracy, graphical and ICT skills.*

Environmental science is the study of present and past processes in the surface and near-surface earth, its waters and atmosphere. It includes physical, chemical, biological and human processes, the history of the earth during the period of human occupancy, and the monitoring and management of natural and human-induced environmental changes. Aspects studied include the complexity and inter-relatedness of the earth's systems, the role of the earth's systems in supporting life and human responses to environmental problems: environmental impact assessment, management and policy; risk based management; the precautionary principle; limits to growth; sustainability and sustainable development.

Environmental Scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

Environmental Science graduates have a long track record in gaining employment across a number of different professions and organisations, including environment-based industries. This is due to the wide range of skills they have developed through hands-on fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the ability to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and unfamiliar environments, are familiar skills to Environmental Scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

## GEOGRAPHY

Geographers possess the following skills and qualities:

*Communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.*

More specifically a typical geographer has:

- *Knowledge of cultural, political, economic and environmental issues.*
- *Knowledge of moral and ethical judgements based on an understanding of diversity in people and places.*
- *Expertise in integrating, analysing and processing information from a range of sources, gained by working with complex environments and issues.*
- *Project management skills including time management, risk assessment and problem solving, resulting from laboratory, desk and field based research.*
- *Well developed literacy, numeracy and graphicacy skills.*
- *Flexibility and adaptability including the ability to deal with the unexpected.*

Geography is an integrated study of the complex reciprocal relationships between human societies and the physical components and processes of the earth. It studies interrelationships and significant regional patterns, recognising the differences and links between cultures, political systems, economies, landscapes and environments across the world. Geographers develop their knowledge through fieldwork and other forms of hands-on learning. This helps to promote curiosity about the social and physical environments, discerning observation and an understanding of scale.

The discipline is characterised by a breadth of subject matter. In recent years, environmental geography has been recognised, encompassing the many courses that deal explicitly with human-environment relations and sustainable development.

Geography graduates have a long track record in gaining employment across a number of different professions and organisations. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Geography are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the ability to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and in unfamiliar environments, are common skills to Geographers. As a result, they have a highly desirable suite of skills that are of a premium to all types of organisations.

## HEALTH STUDIES

A graduate in Health Studies typically will have the ability to:

- *Communicate with others in a clear and articulate manner, using word or number, through written work using appropriate academic conventions.*
- *Present ideas and arguments verbally in formal presentations and seminars, and conduct informal discussions in a variety of environments.*
- *Work with others in the preparation and presentation of group work, and take responsibility for an agreed area of a shared activity.*
- *Negotiate informally with peers and formally with members of organisations.*
- *Identify and propose solutions to problems, both in relation to the substantive area of health studies and to other educational and social issues.*
- *Work independently and identify ongoing personal skill development needs.*
- *Recognise equal opportunities issues and identify appropriate action.*
- *Use IT to store, retrieve and produce material for health studies coursework, drawing on skills in word processing, databases and spreadsheets.*
- *Gather and analyse information from a wide variety of sources using appropriate manual and electronic systems.*
- *Reflect on and review progress in their own studies, and seek assistance or guidance as appropriate in order to enhance their own personal development.*

The study of health is concerned with all aspects of human experiences in health and illness. Health studies as a discipline examines those factors that either increase or decrease human wellbeing. It takes a multi and interdisciplinary approach in the critical examination of health and illness in its wider contexts of local, national, and international issues and compares the experiences of different nations, cultures, or groups. It is a research based subject that constantly seeks to add to current knowledge.

Students of the subject will concern themselves with the exploration of health as a human experience mediated by individual, societal and global contexts, a reflexive and critical evaluation of factors affecting health and its representations and an ability to engage actively in the discourses surrounding the concept of health and its representations.

Subject specific skills that can be gained by studying Health Studies are the ability to:

- Compare a range of health contexts, including individual and institutional, national and international.
- Analyse health issues and information drawn from a wide range of disciplines.
- Synthesise coherent arguments from a range of contesting theories.
- Draw upon the personal and lived experience of health and illness through the skill of reflection and to make links between individual experience of health and health issues and the wider structural elements relevant to health.
- Articulate theoretical arguments within a variety of health studies contexts.
- Draw on research and research methodologies to locate, review and evaluate research findings relevant to health and health issues, across a range of disciplines.

## HEALTH VISITING

A graduate in Health Visiting typically will have the ability to:

- *Exercise numeracy and ICT skills.*
- *Gather information from a wide range of sources including electronic data.*
- *Systematically analyse and evaluate information collected and exercise professional judgement with confidence.*
- *Communicate effectively with the client or patient, their relatives and carers and the group/community/population, about their health and social care needs.*
- *Use assessment techniques and make provisional identification of health and physical, psychological, social and cultural needs and problems.*
- *Recognise the contribution of their assessment within health care through effective communication with other members of the health and social care team.*
- *Maintain the standards and requirements of professional and statutory regulatory bodies and adhere to relevant codes of conduct.*
- *Understand the legal and ethical responsibilities of professional practice.*
- *Maintain the principles and practice of patient/client confidentiality.*
- *Practise in accordance with legislation applicable to health care professionals.*
- *Exercise a professional duty of care to patients, clients and carers.*
- *Recognise the duty to maintain fitness for practice and the need for continuing professional development and learning.*
- *Contribute to the development and dissemination of evidence based practice within professional contexts.*
- *Uphold the principles and practice of clinical governance.*

Health visiting is a specialist discipline within community nursing practice. It has a significant focus on public health and shares areas of practice and health care goals with colleagues in primary care and other professions. The search for health needs is regarded as the primary function of the profession. Through work with individuals, families, groups and communities, health visitors seek to promote health and well-being and prevent illness. Whilst there is an emphasis within health visiting practice on child and family health, work with populations and communities to address issues of health and social inequalities and social exclusion represents an increasing focus on public health.

The health visiting service is dynamic and health-focused and able to respond flexibly to a range of service and community needs. Health visiting is underpinned by four principles that guide and direct professional practice. These are the search for health needs, the stimulation of an awareness of health needs, the influence on policies affecting health and the facilitation of health-enhancing activities.

Degree programmes have an equal balance of theory and practice and graduates must meet professional registration requirements. Learning involves the study of subject specific knowledge, the acquisition of skills and values, the critical application of research knowledge from health and social sciences, and reflection and evaluation in health visiting practice. Students are prepared for multi-professional and multi-agency working.

## MATERIALS

A graduate in Materials Science typically will:

- *Have acquired a good knowledge of basic principles of materials, supported by the necessary background science.*
- *Have a good understanding of the interaction between composition, processing, microstructure and properties, leading to appropriate application of materials.*
- *Have acquired some key practical skills and competence.*
- *Are able to communicate effectively, both orally and in writing.*
- *Have the ability to design and execute an individual project.*
- *Have an awareness of the importance of materials to industry and society.*
- *Have an awareness of sustainability and environmental issues.*
- *Have acquired the relevant mathematical and computational skills.*
- *Have problem-solving skills.*
- *Be able to exercise original thought.*

The study of materials science develops a basic understanding of the part played by selection of materials and choice of manufacturing process in meeting an engineering specification. The study of materials engineering must have its foundations in materials science. Materials are central to the economic wellbeing of the country. This is reflected by rapid developments in new areas of materials such as smart materials, soft solids, nano technology, sensors and biometrics. Materials scientists or engineers help to develop the materials required for new products, find better lower-cost manufacturing routes and enhance the performance of existing materials. They consider the environmental impact and sustainability of their products. They discover how to optimise the selection of materials and create sophisticated databases from which properties and service behaviour can be predicted.

Materials engineers need a foundation of engineering science, mathematics and other sciences in order to understand manufacturing, processing and fabrication methods and to predict the service performance of materials e.g. strength of materials and mechanics of solids, principles of manufacture including computer-aided engineering.

Graduates in materials are also likely to be able to design with materials based on customer requirements and to have practical experience of a range of techniques and materials including computer modelling and project work.

Materials scientists or engineers may work in the manufacturing, processing or user industries, in research, in production, management or in sales. They may be concerned with mass produced artefacts such as cars, tableware, or building materials, or specialist products such as those needed for micro-electronics, sports equipment, replacement body parts, energy generation or aerospace.



## MATHEMATICS, STATISTICS AND OPERATIONAL RESEARCH

A graduate in Mathematics, Statistics or OR, depending on their chosen focus of study, typically will have the ability to:

- *Demonstrate knowledge of key mathematical concepts and topics.*
- *Abstract the essentials of problems and formulate them mathematically and in symbolic form so as to facilitate their analysis and solution.*
- *Present mathematical arguments and the conclusions from them with accuracy and clarity.*
- *Have skills relating to rigorous argument and solving problems in general, and a facility to deal with abstraction including the logical development of formal theories.*
- *Have skills relating to formulating physical theories in mathematical terms, solving the resulting equations analytically or numerically, and giving physical interpretations.*
- *Focus on statistics that will have skills relating to the design and conduct of experimental and observational studies and the analysis of data resulting from them.*
- *Have skills relating to formulating complex problems of optimisation and interpreting the solutions in the original contexts of the problems.*
- *Have the ability to learn independently using a variety of media.*
- *Work with patience and persistence, pursuing problem solutions to their conclusion.*
- *Have good general skills of time management and organisation.*
- *Be adaptable, in particular displaying readiness to address new problems from new areas.*
- *Transfer knowledge to assess problems logically and to approach them analytically.*
- *Have highly developed numeracy and ICT skills.*
- *Have communication skills such as the ability to write coherently and clearly.*
- *Apply concepts and principles in loosely-defined contexts, showing effective judgement in selecting and applying tools and techniques.*
- *Demonstrate appropriate transferable skills and the ability to work with relatively little guidance or support.*

Mathematics is rooted in the systematic development of methods to solve practical problems in areas such as surveying, mechanical construction and commerce. Such methods have a wide range of application. Thus generalisation and abstraction became important features and mathematics became a science involving strict logical deduction with conclusions that follow with certainty and confidence from clear starting points. Mathematics is fundamental to almost all situations that require an analytical model-building approach.

Statistics encompasses the science of collecting, analysing and interpreting data and has become much concerned with the design processes for observational and experimental studies. Statistics uses probability theory as part of the process of making inferences from limited data to underlying structures - looking for the patterns.

Operational research (OR) is concerned with complex optimisation procedures with significant mathematical underpinnings and non-mathematical but academically rigorous problem-structuring methods. It has applications throughout industry, business and commerce, in government, the health and social services, and in the armed forces. Model building is crucial. Some institutions use titles other than OR for degree programmes in this area. One such title is management science.



Graduates can be found throughout industry, business and commerce, the public and private sectors, with large employers and in small organisations. Employers value the intellectual ability and rigour and reasoning skills that mathematics, statistics and operational research students can acquire, their familiarity with numerical and symbolic thinking, and the analytic approach to problem-solving being their hallmark.

## MIDWIFERY

A graduate in Midwifery typically will have the ability to:

- *Act on own initiative including initiating the action of other professionals and know when to refer.*
- *Recognise own learning needs and independently advance learning and understanding.*
- *Reflect on and modify behaviour in the light of experience and act where necessary.*
- *Apply effective skills in team building, group activities and organisation of others, liaising and negotiating across organisational and professional boundaries and differences of identity or language.*
- *Handle interpersonal and intrapersonal conflict constructively and be aware of effective strategies for coping with personal stress.*
- *Understand and manage changing situations and respond flexibly.*
- *Challenge unacceptable practices responsibly based on the critical review and dissemination of research and audit findings.*
- *Justify practice in the light of risk management frameworks and clinical governance.*
- *Exercise judgement and responsibility based on available evidence to work with women in achieving the best possible birth outcomes.*
- *Apply IT, numeracy, verbal and written communication skills.*
- *Apply the principles of health promotion and education to midwifery practice.*

Midwives work with women and their families to assess their needs and to determine and provide programmes of care and support prior to conception and throughout the antenatal, intranatal and postnatal periods. They focus on providing holistic care which respects individual needs, choices and cultures in a variety of contexts. Legislation enables midwives to carry out their role autonomously, while expecting them to work in partnership with others and across professional boundaries when this is in the best interests of women and their families. Midwives work in and across a wide range of settings, from women's homes to acute hospitals. They also make a significant contribution to the wider public health agenda.

Midwifery is an applied academic subject, underpinned by the human biological sciences and the social sciences, in particular psychology and sociology. Its mastery requires proficiency in a range of cognitive, affective and psychomotor skills. It is the integration of these underpinning elements which establishes the basis for midwives to provide care which is woman centred and focused on the premise that childbirth is normally a natural, physiological and important event in women's lives. The midwife's role also centres on the woman in the family context. The care of the family during childbearing is central to the definition of the discipline.

The pre registration midwifery programmes of education and training are built around university and practice-based learning. These two elements enable students to develop autonomy and confidence and to emerge as competent practitioners with the capacity to work effectively in women's homes, hospital, community clinics or other settings as part of a broadly based health and social care team.

## NURSING

*A graduate in Nursing typically will have the ability to:*

- *Apply creative solutions to health care situations.*
- *Confidently present information orally, in writing and through the use of technology, to provide coherent and logical arguments in the support of decision making.*
- *Engage in, and disengage from therapeutic relationships through the creative use of theories and skills, demonstrating ethical discernment and clinical judgement.*
- *Use practical skills and knowledge with confidence and creativity.*
- *Critically analyse and interpret data for care delivery and management.*
- *Manage oneself, one's practice and that of others in accordance with the Code of Professional Conduct, and critically evaluate own abilities and limitations.*
- *Select and apply knowledge and skills to complex and unexpected situations.*
- *Implement strategies to promote and evaluate partnership working.*
- *Anticipate potential stressful situations and participate in minimising risk.*
- *Demonstrate sound clinical judgement in a range of situations and critically evaluate the effectiveness of clinical judgement in a range of professional care contexts.*
- *Participate in quality assurance and risk management strategies to create and maintain a safe environment.*
- *Provide guidance, role-modelling and support to others in health care delivery.*
- *Critically analyse roles within the multi-professional team and propose ways to strengthen patient-centred care.*

Nursing is an applied vocational and academic discipline practised in a variety of complex situations. Nursing focuses on promoting health and helping individuals, families and groups to meet their health care needs. The work involves assisting people whose autonomy is impaired and who may present a range of disabilities or health related problems. Nurses work with patients, clients, families and communities in primary care, acute and critical care, rehabilitation and tertiary care settings.

Nurses practise within a social, political and economic context. Through their Code of Professional Conduct, nurses embrace the concepts of inclusion, equal opportunities, individual rights and empowerment of patients and client groups. Professional and patient/client autonomy is a key feature.

The knowledge, understanding and associated skills that underpin the education and training of nurses covers nursing, natural and life sciences, social, health and behavioural sciences, ethics, law and the humanities, the management of self and others' reflective practice and the application of all of these to nursing care of clients and client groups.

Pre-registration nursing education consists of a common foundation programme and four branch programmes to prepare nurses to work in either adult nursing, children's nursing, learning disabilities nursing or mental health nursing.

## PHARMACY

A graduate in Pharmacy typically will have:

- *Mastery of a substantial body of knowledge, with practical and manipulative skills .*
- *The ability to apply scientific and technical rigour to the use of medicines.*
- *Evidence-based decision-making skills and problem solving skills.*
- *Independent learning skills, forming the basis for lifelong learning.*
- *A multidisciplinary and integrative approach to solving health care problems.*
- *An ethical attitude, characterised by assuming personal and professional responsibility for the proper discharge of their role in society.*
- *A thorough understanding of law and ethics relating to pharmacy.*
- *Development of a high level of interpersonal skills, which are analytical, critically aware, evaluative, interpretative, empathic and reflective.*
- *Numeracy and computational skills, including error analysis, order-of-magnitude estimations, correct use of units and modes of data presentation.*
- *Time management and work organisational skills.*

Pharmacy combines the pharmaceutical sciences with related aspects of health care. It is a professional discipline, concerned with the provision of evidence based advice to patients and the public on general health matters. Pharmacists are scientists in the health care community, bringing together physical, biological, clinical, social and behavioural sciences in relation to medicines and their usage. The practice of pharmacy can comprise managing medicines at a strategic and individual patient level, the management of repeat dispensing systems, supplementary prescribing, monitoring the effects of medicines, and specialisations such as independent prescribing, diagnostic testing. In the pharmaceutical industry, pharmacists' roles include formulating new products, planning and optimisation of drug development strategies, advising on regulatory issues, marketing, and the management of scale-up and large scale production of medicines.

Pharmacy degrees are designed to produce graduates who think clearly and systematically but there is also a strong vocational element which prepares them for their pre-registration training. Education takes a minimum five years; four years at university and a year of practical training. Graduates have a strong academic science base, are competent pharmaceutical scientists and are well prepared for a health care role.

Currently, the majority of pharmacy graduates practise in community pharmacies or NHS hospitals, although a growing number work in general medical practitioner practices, NHS primary care organisations and strategic health authorities. Pharmacists also work in the pharmaceutical industry and universities. Small numbers work in other sectors, applying their knowledge of medicines to many issues.

## PHILOSOPHY

A graduate in Philosophy typically will have:

- *The ability to analyse problems in a multi dimensional way.*
- *The ability to think creatively, self critically and independently.*
- *Self motivation.*
- *The ability to work autonomously.*
- *Time and priority management skills.*
- *A flexible mind adaptable to managing change.*

Philosophy seeks to understand and question ideas concerning reality, value and experience. Concepts such as existence, reason and truth, occur in every sphere of human enquiry. Philosophy is open-ended, constantly questioning and refreshing itself, the very essence of learning and knowledge.

A degree in vocational subjects like Business, Finance, Law, Marketing or Media Studies provides immediate skills and practical tools for gaining entry into the employment market, whereas Philosophy focuses on providing the ideal environment in which to develop the fundamental and essential attributes on which these skills depend. Philosophy teaches the student how to analyse and communicate ideas in a clear, rational and well thought out way. Students of philosophy learn to develop and defend an opinion, they learn how to learn and how to think. With such in-depth grounding, philosophy graduates are likely to develop into well rounded, mature, thoughtful and articulate employees.

Studying formal logic helps students acquire skills in symbol manipulation, formal systems and abstract thinking and it also influences the wider skills of analysis and a detailed understanding of argument structure. These skills are of immediate value in computer and information management careers and in all contexts where precision, clarity and high level abstract planning and analysis are required.

Philosophy students will develop general skills like the ability to think logically, analyse critically, communicate articulately and accurately, both orally and in writing.

These are the skills that employers indicate are so important for middle management and leadership roles. The skills of vision, creativity and analytical power being developed through the study of Philosophy will have a premium.

## PHYSICS

A graduate in Physics typically will have the ability to:

- *Demonstrate knowledge and understanding of fundamental physical laws and principles and apply these principles to diverse areas of physics.*
- *Solve problems in physics by identifying the appropriate principles, using science techniques such as special and limiting cases and order-of-magnitude estimates.*
- *Solve problems by making assumptions and approximations explicit.*
- *Identify relevant principles and laws of physics when dealing with problems.*
- *Plan, carry out, analyse and report the results of an experiment or investigation.*
- *Analyse data and evaluate the level of uncertainty in results.*
- *Use mathematics to describe the physical world.*
- *Understanding mathematical modelling and of the role of approximation.*
- *Develop the confidence to try different approaches in tackling challenging problems.*
- *Develop skills of independent investigation.*
- *Communicate well, listen carefully, read demanding texts, and present complex information clearly and concisely.*
- *Pay attention to detail and manipulate precise and intricate ideas, construct logical arguments and use technical language correctly.*
- *Develop computing and IT skills in a variety of ways, including using appropriate programming languages and packages.*
- *Work independently, using initiative, planning and organising to meet deadlines, and interact constructively with other people.*
- *Manipulate numerically and present and interpret information graphically.*
- *Produce clear and accurate scientific reports.*
- *Manage own learning.*
- *Use laboratory apparatus and techniques soundly.*
- *Analyse critically the results of an experiment or investigation and draw valid conclusions.*
- *Evaluate the level of uncertainty in experiment results and compare these results with expected outcomes, and evaluate the significance of the results.*

Physics is concerned with the observation, understanding and prediction of natural phenomena and the behaviour of man-made systems. It deals with profound questions about the universe and important practical, environmental and technological issues. It involves mathematics and theory, experiment and observations, computing, technology, materials and information theory. Ideas and techniques from physics drive developments in chemistry, computing, engineering, materials science, mathematics, medicine and the life sciences, meteorology and statistics. Physics is both theoretical and practical.

The fundamentals, which all undergraduate students cover to some extent, include electromagnetism, quantum and classical mechanics, statistical physics and thermodynamics, wave phenomena and the properties of matter. Students also study the application of the fundamental principles to particular areas which may include atomic physics, nuclear and particle physics, condensed matter physics, materials, plasmas and fluids. Physics graduates are numerate, articulate and eminently employable in a wide range of jobs.

## PLANNING

A graduate in Planning typically will have the ability to:

- *Solve problems creatively and collect, analyse, evaluate and synthesise planning data.*
- *Apply practical design skills.*
- *Influence through negotiation, facilitation and networking.*
- *Exercise organisational sensitivity in multi professional working environments.*
- *Present arguments using a variety of formats.*
- *Use IT, statistics, numeracy and literacy skills.*
- *Take responsibility enthusiastically for their own learning.*
- *Manage and produce work to time.*
- *Work individually and in groups.*
- *Exercise initiative and independence within a range of personal values.*

Planning contributes to delivering and safeguarding environmental sustainability, social equity, cultural diversity and economic prosperity, all aspirations that civilised societies hold dear. It generates creative proposals for change by means of negotiation and advocacy within a complex web of competing interests. Positive action is the heart of planning and operates within environmental, social, economic, legal and governance constraints.

Academically, planning is the study of the way societies plan, design, manage and regulate change in the built and natural environment. It therefore includes the study of why and how societies intervene, shape, organise and change natural and built environments so as to secure an agreed range of social, economic and environmental objectives. The core of the discipline is the study of the rationale for planning and how it is practised. This involves understanding the processes of spatial change in the built and natural environments and also understanding the arguments for intervening in these processes. It requires an understanding of the land, property and development markets, including economic, financial and legal aspects. It also requires an understanding of design and the development of sustainable built and natural environments.

Other skills relating to employability that can be learned include the ability to:

- Identify and formulate planning problems and to write clear aims and objectives.
- Translate theory and knowledge into practical planning policies and actions, including formulating and articulating strategies, plans and designs.
- Collect, analyse, evaluate and synthesise planning data.
- Research in planning.
- Monitor and evaluate planning interventions and outcomes.
- Demonstrate an awareness of professional working practices and values.
- Formulate and propose elementary policies, strategies and courses of actions.
- Define and analyse planning problems and arguments effectively and appropriately.
- Demonstrate understanding of the treatment and exposition of subject matter, making connections between the different areas of the planning curriculum.



## PSYCHOLOGY

A graduate in Psychology typically has:

- *Research skills including the ability to apply multiple perspectives to psychological issues involving a range of research methods, theories, evidence and applications.*
- *Analysis skills including identifying and evaluating general patterns in behaviour, psychological functioning and experience, generating and exploring hypotheses and research questions, undertaking empirical studies, data analysis skills using quantitative and qualitative methods, using psychological tools, laboratory equipment and psychometric instruments, and applying evidence-based reasoning.*
- *Communication skills including developing a cogent argument supported by relevant evidence and being sensitive to the needs and expectations of an audience.*
- *IT and data handling skills, with familiarity with understanding, analysing, and presenting complex data sets.*
- *Effective team working skills. Through research projects and other curricular activities.*
- *Problem solving and reasoning skills.*
- *Interpersonal skills, including being sensitive to the importance of enhancing co-operation to maximise the effectiveness of individual skills as shown in group work and team building;*
- *Life long learning skills.*

Psychology is an empirical science which aims to understand how and why people act in the ways they do and to apply that knowledge in a wide variety of settings. The discipline spans studies ranging from the observations of basic neural mechanisms to analyses of complex human relationships. The antecedents of modern-day psychology can be found in both biology and philosophy, but its methods of enquiry have developed not only from these disciplines but also from other natural, social and mathematical sciences. Psychology is a broad subject area but, whatever the particular topic of study and wherever the origins of its methods, it attempts to analyse and explain behaviour in a systematic, reproducible way. There is often a virtuous circle between theory and empirical data, the results of which may find their expression in applications to educational, health, industrial/commercial and other situations.

In addition to subject skills and knowledge, psychology graduates also develop skills in communication, numeracy, teamwork, critical thinking, computing, independent learning and research as well as many others, all of which are highly valued by employers. Because of the wide range of generic skills and the rigour with which they are taught, training in psychology is widely accepted as providing an excellent preparation for a number of careers. Psychology students are found in teaching, industry, social services, the media, information technology, computing, marketing and government agencies.

## RELIGIOUS STUDIES

A graduate in Religious Studies typically has:

- *Empathy and imaginative insight.*
- *Self-discipline and self-direction.*
- *Independence of mind and initiative and a belief in life long learning.*
- *Teamwork skills including attending to others and having respect for others' views.*
- *Ability to gather, evaluate and synthesise different types of information.*
- *Analytical ability and the capacity to formulate questions and solve problems.*
- *IT and presentation skills.*
- *Writing skills, including accurate referencing and clarity of expression.*
- *Ability to attend closely to the meaning of written documents.*

The subject's vitality and richness reflects its significance in a world coming to terms with cultural and religious diversity. Beliefs, values and institutions, whether religious or not, are contested. Religious Studies in higher education values cultures, texts, arts and practices of societies within and beyond Europe, interacts with social sciences and contemporary cultural, literary and gender studies, engages with the plurality of religions and compares cross-cultural topics such as beliefs and practices.

Degree courses vary in approach but aim to promote understanding by, for example:

- Stimulating curiosity about religious cultures across the globe, both past and present.
- Study of the sacred texts, history, practices and thought of religious traditions.
- Creating opportunities to consider the artistic, ethical, social, political and cultural characteristics of religions.
- Exploring links between religion on the one hand and literature, culture and the arts on the other.
- Opening up awareness of plurality within societies.
- Fostering empathetic engagement with familiar and unfamiliar viewpoints.
- Promoting self critical awareness of presuppositions and encouraging constructive and critical exposition of arguments.
- Inviting dialogue between different traditions.
- Encouraging intelligent use of a variety of theories and methods of study.
- Providing opportunities for critical involvement in changing the way things are e.g. liberationist or feminist approaches.
- Language studies, fieldwork, social surveys and the visual and performing arts.

Religious Studies students are well equipped to enter into many occupations including careers in education, research, law, journalism and the media, social and pastoral care, counselling, mediation and negotiation roles, government, prison services, project management, training and facilitation roles, charity work, personnel and accountancy.

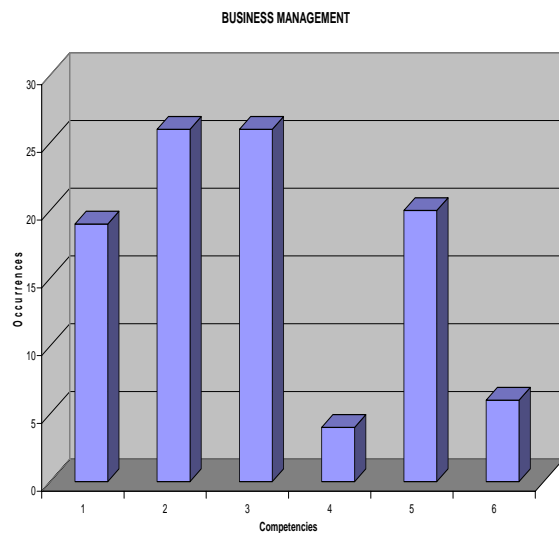
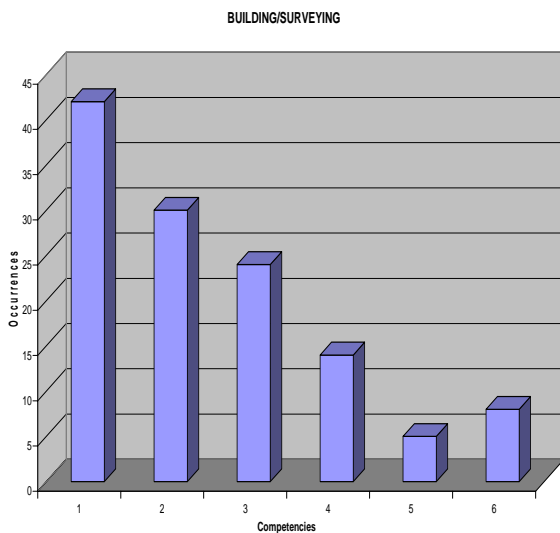
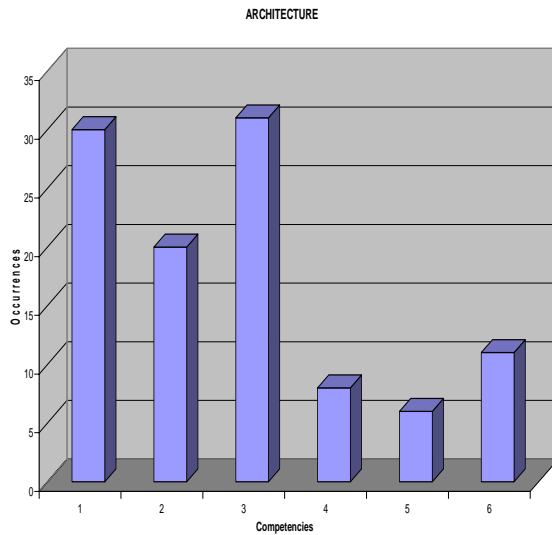
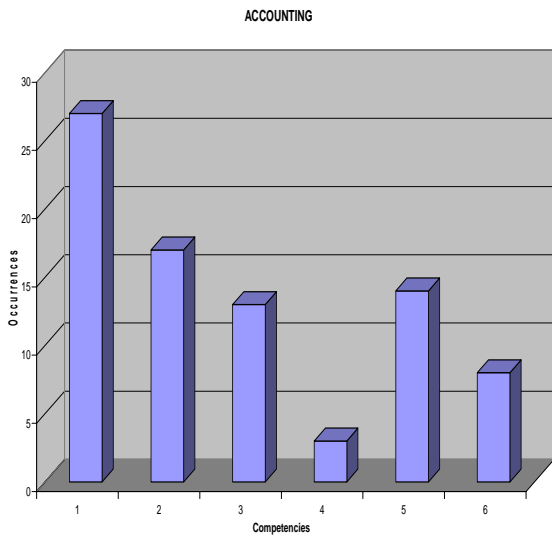
## GLOSSARY OF COMPETENCIES DEFINITIONS

<b>ACHIEVEMENT ORIENTATION</b>	Maintains and inspires a results-driven approach, focuses on results and critical performance indicators.
<b>ADAPTABILITY / FLEXIBILITY</b>	Maintains effectiveness in a changing environment.
<b>ANALYSIS</b>	Relates and compares data from different sources, identifying issues, securing relevant information and identifying relationships.
<b>ATTENTION TO DETAIL</b>	Accomplishes tasks through a concern for all areas involved, no matter how small.
<b>COMMERCIAL AWARENESS</b>	Understands the economics of the business. Understands the business benefits and commercial realities from both the organisation's and the customer's perspectives.
<b>CREATIVITY</b>	Generates and/or recognises how best practice and imaginative ideas can be applied to different situations.
<b>COMMERCIAL AWARENESS</b>	Understands the economics of the business. Understands the business benefits and commercial realities from both the organisation's and the customer's perspectives.
<b>DECISIVENESS</b>	Makes decisions and takes action.
<b>FINANCIAL AWARENESS</b>	Understands basic financial terms used in organisations and is able to construct and maintain simple financial records.
<b>IMAGE</b>	Presents a strong, professional, positive image to others at all times. This image is consistent with all people (colleagues, management and peers, customers etc.).
<b>INFLUENCING</b>	Influences others by expressing self effectively in a group and in one to one situations.
<b>INITIATIVE</b>	Identifies opportunities and is pro-active in putting forward ideas and potential solutions.
<b>INTERPERSONAL SENSITIVITY</b>	Recognises and respects different perspectives and appreciates the benefits of being open to the ideas and views of others.
<b>JUDGEMENT</b>	Determines the most appropriate course of action and draws conclusions that are based on logical assumptions that reflect factual information.

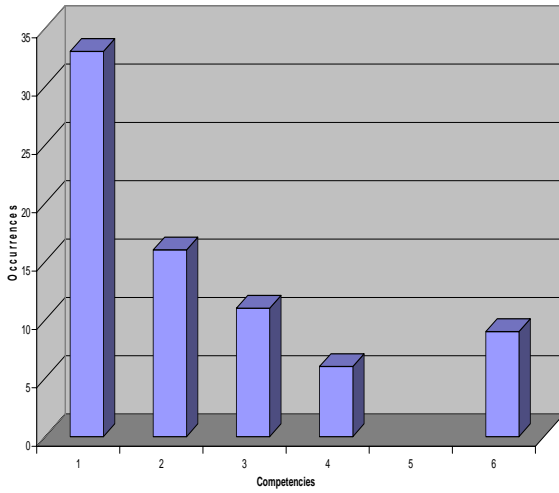
<b>LEADERSHIP</b>	Takes responsibility for the directions and actions of a team.
<b>LIFELONG LEARNING AND DEVELOPMENT</b>	Develops the skills and competencies of self, peers and colleagues through learning and development activities related to current and future roles.
<b>LISTENING</b>	Shows by a range of verbal and non-verbal signals that the information being received is understood.
<b>ORGANISATION UNDERSTANDING</b>	Understands the organisation's work environment, internal politics, business objectives and strategy.
<b>ORGANISATIONAL SENSITIVITY</b>	Is sensitive to the effect of his or her actions on other parts of the organisation and adopts a mature, direct and up front style in dealing with conflict.
<b>PERSONAL DEVELOPMENT</b>	Maintains an up to date personal development plan and takes action to ensure personal development takes place.
<b>PLANNING AND ORGANISING</b>	Establishes a course of action for self and/or others to accomplish a specific goal. Plans proper assignments of personnel and appropriate allocation of resources.
<b>PROCESS OPERATION</b>	Begins, controls and concludes a complete process or procedure.
<b>PROFESSIONAL EXPERTISE</b>	Keeps up to date with developments in own areas of professional specialisation. Applies a breadth and/or depth of professional knowledge.
<b>QUESTIONING</b>	Uses an appropriate approach to questioning in order to gain information from which to draw conclusions and/or assist in the making of decisions.
<b>TEAMWORK / WORKING WITH OTHERS</b>	Builds and develops appropriate relationships with academic staff, peers, colleagues, customers and suppliers at all levels within an organisation.
<b>TECHNICAL APPLICATION</b>	Has experience of using modern technology.
<b>TECHNICAL KNOWLEDGE</b>	Develops and maintains a knowledge of key trends in technology.
<b>TOLERANCE OF STRESS</b>	Maintains performance under pressure and / or opposition.
<b>WRITTEN COMMUNICATION</b>	Expresses ideas effectively and conveys information appropriately and accurately.

**CHARTS**

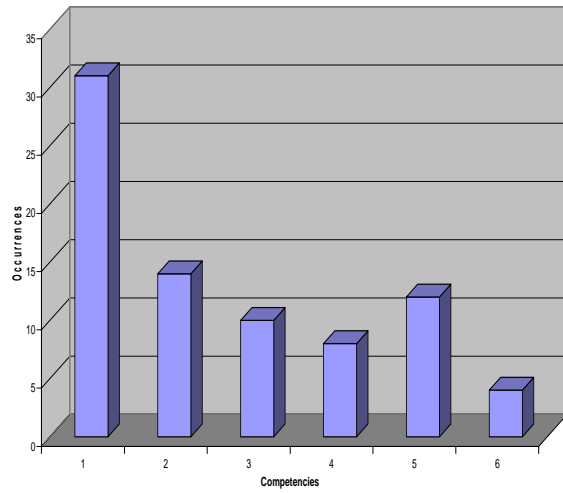
The results shown on the charts that follow have been obtained by looking at the number of occurrences of a specific competence within the benchmark statements and through discussions with the relevant Higher Education Subject Centres. The evaluation is based on the mean and standard deviation for each subject/competency. The results do not measure course content or quality nor do they in anyway look at individual institutions or the ability of individual students studying a specific subject. It must be remembered that each student will have developed his or her own level of expertise and skill through their higher education experience. Twenty of the twenty three subjects are shown here.



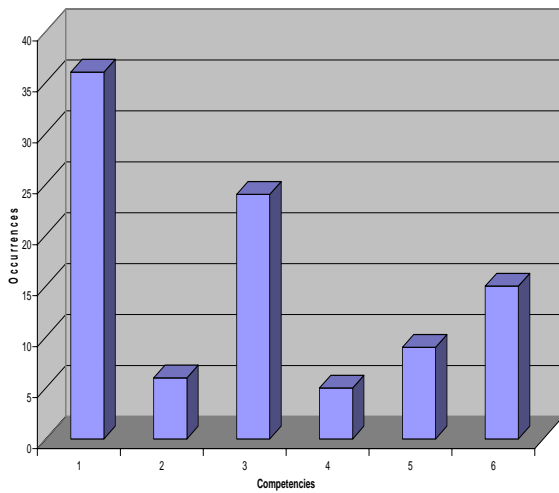
CHEMISTRY



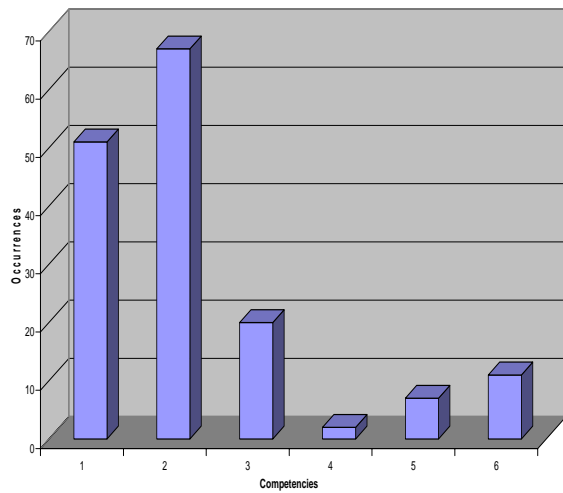
ECONOMICS



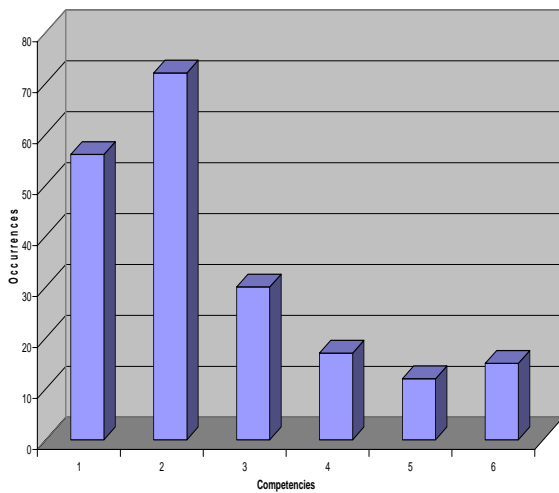
ENGINEERING



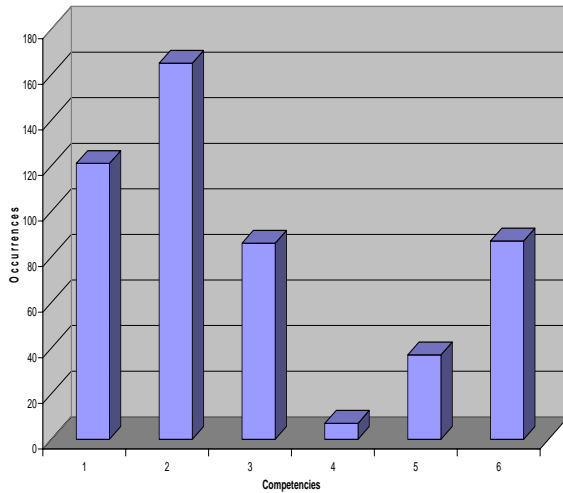
ENGLISH



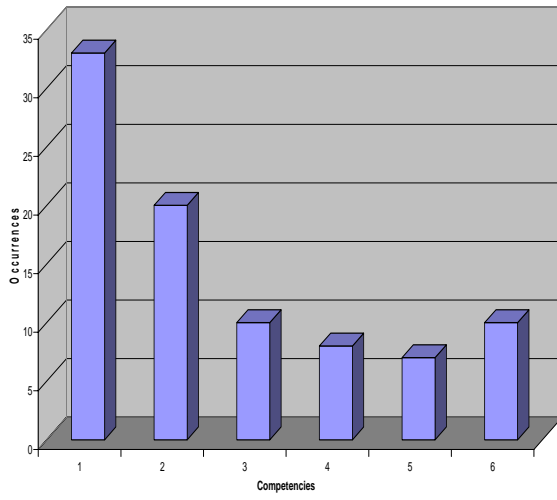
HEALTH STUDIES



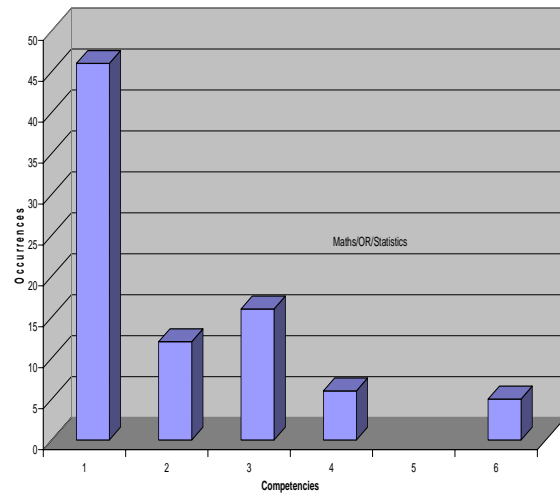
HEALTH VISITING



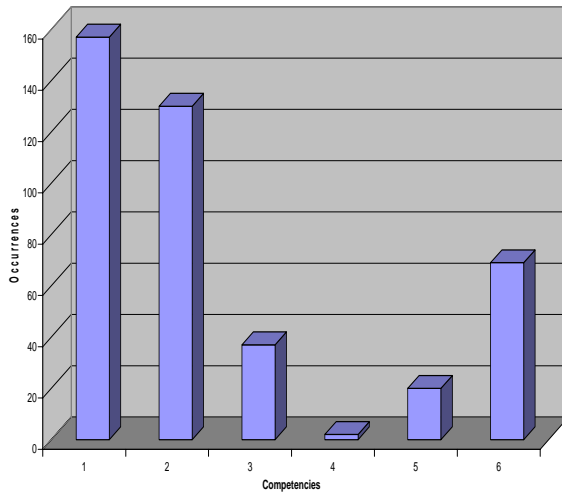
MATERIALS



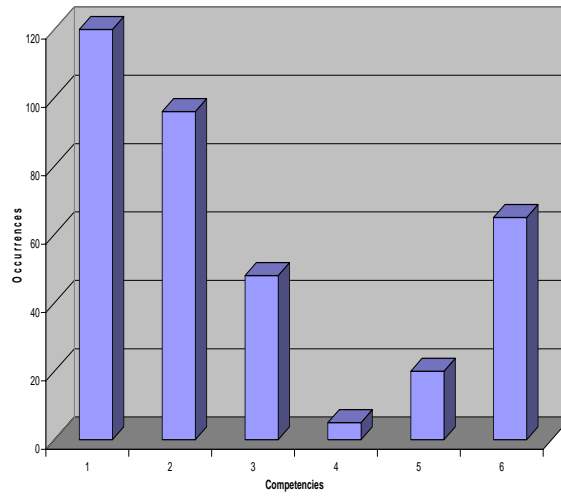
MATHEMATICS, STATISTICS, OR



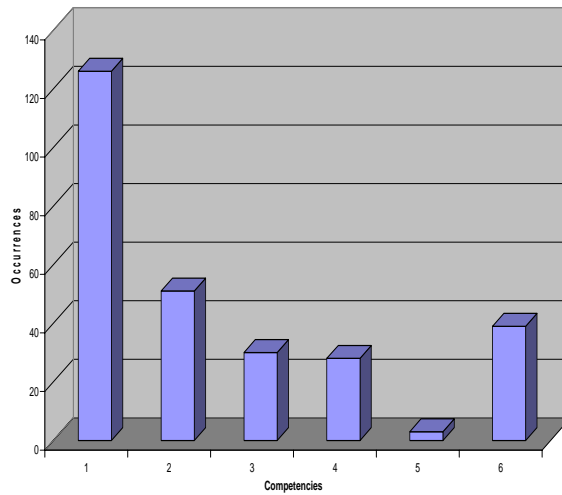
MIDWIFERY



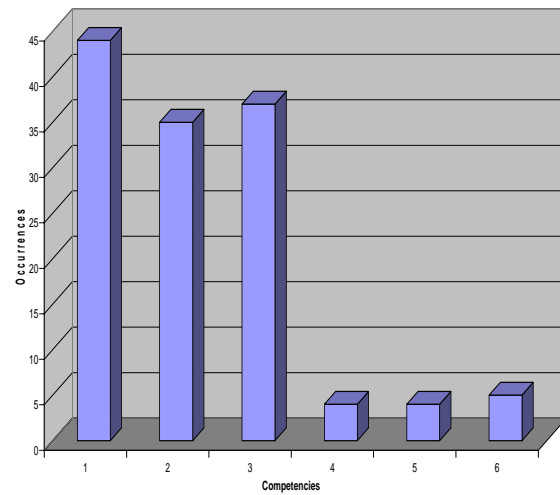
NURSING



PHARMACY

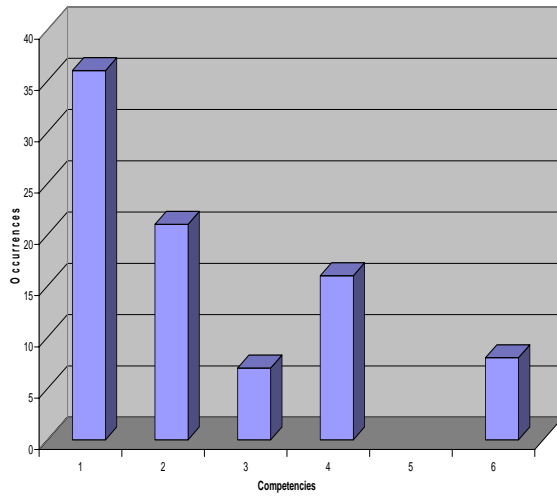


PHILOSOPHY

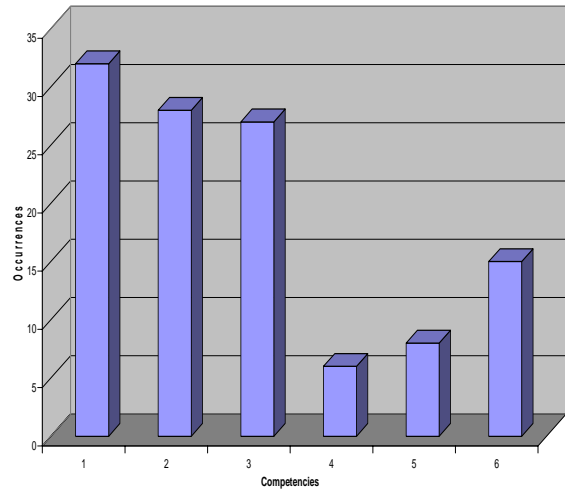




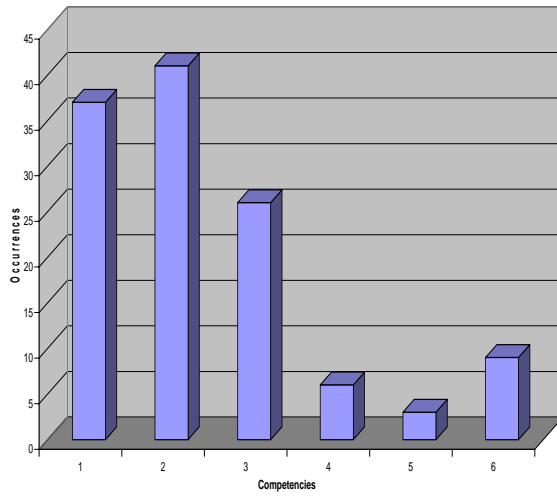
PHYSICS



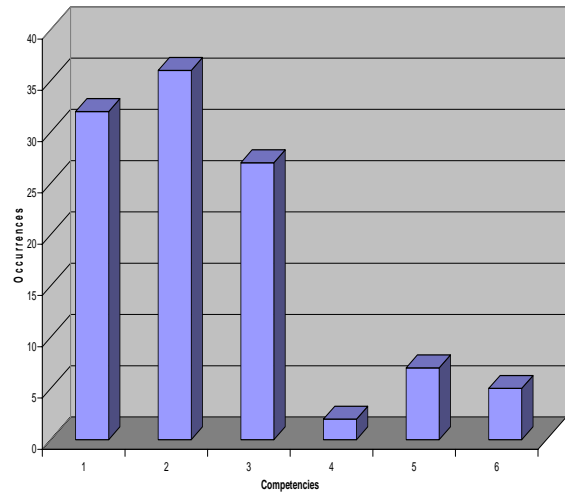
PLANNING



PSYCHOLOGY



RELIGIOUS STUDIES



## WAY FORWARD

A number of ways forward are possible following the publication of this guide. The employability skills agenda will continue to unfold and be of particular importance in those sectors of the economy with significant skills shortages. Universities are actively driving their own employability skills activities supported by the Higher Education Academy and driven in part by competitive and financial pressures. Underpinning all this is a desire common to all stakeholders, academics and employers alike, to support students in their learning and personal development so that they may make the most of their potential and play a full part in society.

For further details of the student employability profiles, see the CIHE website.

For more guidance on student employability, see the Prospects website.

See also the recent publication *Fishing for Talent in a wider pool: trends and dilemmas in corporate graduate recruitment* (published as IES Report 421, March 2005). This is a joint research study between CIHE and the Institute for Employment Studies (IES) on how major UK employers are approaching graduate recruitment and selection against a backdrop of their diverse business needs, the wider pool of graduates available, and the increasing use of the internet for recruitment purposes.

## LINKS

AGCAS	<a href="http://www.agcas.org.uk">www.agcas.org.uk</a>
AGR	<a href="http://www.agr.org.uk">www.agr.org.uk</a>
CIHE	<a href="http://www.cihe-uk.com">www.cihe-uk.com</a>
ESECT	<a href="http://www.hefce.ac.uk/learning/tinits/esect">www.hefce.ac.uk/learning/tinits/esect</a>
Higher Education Academy	<a href="http://www.heacademy.ac.uk">www.heacademy.ac.uk</a>
Graduate Prospects	<a href="http://www.prospects.ac.uk">www.prospects.ac.uk</a>
IES	<a href="http://www.employment-studies.co.uk">www.employment-studies.co.uk</a>
QAA	<a href="http://www.qaa.ac.uk">www.qaa.ac.uk</a>
SCOP	<a href="http://www.scop.ac.uk">www.scop.ac.uk</a>
SSDA	<a href="http://www.ssda.org.uk">www.ssda.org.uk</a>
Universities UK	<a href="http://www.UniversitiesUK.ac.uk">www.UniversitiesUK.ac.uk</a>

*'Another very useful reference for recruiters. Provides a valuable insight into the learning experience of students. Should help broaden employers' understanding of what it is that graduates have to offer and help widen the pool of talent that they can target - an important consideration in the war for talent!'*

Carl Gilleard, Chief Executive, **AGR**

# CIHE PUBLICATIONS

## **Higher Education: More Than a Degree**

This consultation at St George's House in January 2005 follows on from our successful consultation in March 2004 and focused on the student experience of higher education. (£5) (CIHE March 2005) ISBN: 1 874223 50 5

## **The Value of Higher Education**

A guide for students and their advisers on the value of higher education and what businesses look for in the graduates they recruit. This document was written with support from CIHE and UCAS, in association with Prospects. Available electronically from UCAS and CIHE websites, and in hard copy from UCAS.

*Vikki Pickering* (CIHE and UCAS, New Edition available: Spring 2005)

## **Work Based Learning: A Consultation**

Identifies some of the issues that need to be resolved if universities and colleges are to capture a greater share of the market for learners who are in work.

*Helen Connor* (£5) (CIHE February 2005) ISBN: 1 874223 48 3

## The Business of Knowledge Transfer

With reference to US Institutions, this report stresses the wide range of university knowledge transfer relationships and the need for appropriately wide metrics against which to evaluate performance.

*Philip Ternouth* (£5) (CIHE October 2004) ISBN: 1 874223 47 5

## Higher Education Leadership and Fundraising

Summarises the Council discussion with the US fundraising guru John Glier on how US institutions have secured funding. (Free) (CIHE June 2004) ISBN 1 874223 46 7

## Higher Education and the Public Good

**Summary of a consultation on how the fundamental values of HE can be better asserted.**

Supported by CIHE, SRHE and St George's House Windsor  
(Free – website only) (CIHE June 2004) ISBN 1 874223 45 9

## **Universities of Applied Sciences: The German experience**

The third in the series on how other countries are meeting employer needs notes how the German Universities of Applied Science (Fachhochschule) that are "equal but different from traditional universities" are the success story of modern Germany in meeting the skills gap.

*Professor Helga Meyer* (£5) (CIHE January 2004) ISBN 1 874223 44 0

## **The Value of Higher Education**

The UK economy and society rely on the development of more well-educated people and on the dissemination and application of knowledge. This document sets out the arguments for this expansion. (£5) (CIHE October 2003) ISBN 1 87 4223 42 4

## Diversity and Co-operation in Higher Education

The diversity of higher education in the United Kingdom is one of its strengths. Partnerships can help HE and FE focus on what they do best and relate to national, regional and local aims. (£5) (CIHE September 2003) ISBN 1 874223 43 2

## Community Colleges: the United States experience

Experience in the US demonstrates that community colleges can and should play a vital role in the economic development of the regions. What can be learned from their experience?

*Augustine P. Gallego* (£5) (CIHE September 2003) ISBN 1 87 4223 41 6

## Business-University Collaboration: CIHE's input to the Richard Lambert Review

**(£5) (April 2003) ISBN1 874223 40 8**

The Future of Higher Education: CIHE's response to the government's strategic review of HE (£5) (April 2003) ISBN 1 874223 39 4

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**The Council for Industry and Higher Education**

Registered Office

Studio 11, Tiger House

Burton Street, London, WC1H 9BY

Tel: 020 7383 7667 Fax: 020 7383 4774

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[cihe@cihe-uk.com](mailto:cihe@cihe-uk.com)

[www.cihe-uk.com](http://www.cihe-uk.com)