

Closing date: 8 March 2019 Job reference: 80420





Industry Professorial Fellowships Scheme

The University

We have a long and proud history of firsts at the University of Birmingham; we were the first – and are now one of the largest – civic universities in the UK. We were also the first UK university to, amongst other things:

- Be built on a campus model
- Establish a Faculty of Commerce
- Incorporate a Medical School
- Welcome women to take medical degrees

More recently, we were the first university to establish a fully comprehensive secondary school, and when we opened our new campus in Dubai last autumn, we became the first Russell Group and Global Top 100 university to do so.

Our heritage as the original 'redbrick' university is combined with one of the most compelling and ambitious agendas in higher education. Quite simply, at Birmingham we make things happen. Birmingham is a leading member of the Russell Group and a founder member of the Universitas 21 global network of research universities.

Home to world-class researchers, we count 11 Nobel Laureates among our staff and alumni, including three prizes awarded in 2016 for Physics and Chemistry. We have been integral to some of the greatest scientific discoveries of recent times, such as the Higgs boson and gravitational waves, and are pioneering new approaches to tackling some of the biggest global challenges facing society; from antibiotic resistance and maternal health to conflict resolution and access to education.

With more than 8,000 staff, 34,000 students and 300,000 alumni across the globe, we think, recruit, and compete worldwide. Ranked in the top 100 universities globally and the top 20 in all domestic league tables, the quality of what we do at Birmingham is widely recognised. We were awarded Gold in the 2017 Teaching Excellence Framework and in the most recent Research Excellence Framework (REF2014), more than 80 per cent of our research was rated as internationally excellent or world-leading. In 2014, *The Times* and *The Sunday Times* named us University of the Year in recognition of our bold, ambitious strategy and innovative approach to the challenges facing the sector. In 2016, they named us University of the Year for Graduate Employment – recognising our sector-leading employability programmes and outstanding rates of graduate employment.







Thinking differently is in our DNA. Led by our Vice-Chancellor, Professor Sir David Eastwood, the University is structured for swift decision-making, enabling us to capitalise on our academic range and financial strength as well as the opportunities that emerge in the fast-changing global HE environment. Many of our initiatives, such as our 'Birmingham Fellows' programme, which has so far seen over 150 of the world's best early-career academics join us, our widening participation activities, and our unconditional offers strategy for exceptional students, have been much emulated within the sector.

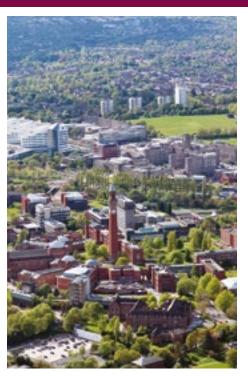
Investing for the future

At Birmingham, we have a clear vision, ambitious leadership, world-leading academic strengths, and a secure financial base. Our plans for the future are underpinned by long-established financial probity. With an annual turnover exceeding £650 million, we use our financial strength to invest in the intellectual and physical future of the University, enabling us to plan with confidence and to continue to invest in the facilities and services that are required for high-quality research and an outstanding student learning experience. This judicious planning has enabled us to deliver a capital development programme. Some £300 million has been invested in the Birmingham campus over the past three years and our staff, students and wider community are already benefiting from a number of signature buildings, including a best-in-class library, a Collaborative Teaching Laboratory for STEM subjects, a major sports centre. a dedicated postgraduate centre, outstanding new student accommodation, and a state-of-the-art student services hub. We have now embarked on a further capital investment that will exceed £600 million over the next five years. Development is moving apace to establish a stunning Green Heart parkland area at the centre of our campus, a new building for Engineering, a Centre for Human Brain Health, a Life Sciences Park, and many other facilities to benefit our academic and student communities. These developments also benefit the wider Birmingham community, with schoolchildren from across the city learning to swim in our pool and 50,000 people to date visiting our recently reopened Lapworth Museum of Geology. As an anchor institution in the city, we contribute £3.5 billion a year to our region's economy. The University of Birmingham School is part of this civic vision, providing an outstanding academic education for the city's young people and serving as a centre of teacher education in the region.

A convenor of debate

The University also plays an important role in shaping the national political agenda. We count two UK former Prime Ministers among our past Chancellors, and continue to welcome MPs, Ministers, and Prime Ministers to our campus. We regularly host political debates and events, bringing together people from across the political spectrum to debate the biggest issues, indeed as one political commentator put it: 'The magnificent Great Hall of the University of Birmingham has established itself as one of Britain's great cathedrals dedicated to our political devotions.'

Our research helps to shape the national political agenda too. The groundbreaking Birmingham Policy Commissions bring together key figures from the public, private, and third sectors with our academics to generate new thinking on contemporary issues of global, national and civic concern. Commissions to date have included reports on the shape and nature of local public services in a 'big society', the future of nuclear energy in the UK, the security impact of drones, Healthy Ageing, Mental Health, and Cold Energy.







Exceptional research

The University is one of the UK's most successful institutions in terms of attracting research funding. We have a portfolio of 2,515 live projects with an award value to the University of £709 million. Our research record speaks for itself; the total value of research funding won by the University in 2017–18 was £204 million, and we are looking to double our research income over a ten-year period to 2026. More than 80 per cent of all research outputs submitted by Birmingham to the latest UK-wide research quality survey (REF2014) were rated as internationally excellent or world leading. These results also showed that 87 per cent of submitted research impact case studies were judged to have global impact, further confirming our position among the world's top universities for research in a broad range of areas, from Psychology, History, and Education to Chemical Engineering.



Outstanding students

We have been encouraging bold, independent thinking and providing exceptional academic programmes that stretch and challenge for more than a century. We are proud of our excellent teaching that has been recognised in both the University's recent outstanding performance in the Quality Assurance Association's (QAA) Higher Education Review and our Gold rating in the 2016–17 Teaching Excellence Framework (TEF).

We understand that every student is individual with a unique learning style, and have invested in the latest learning facilities and technologies. As a result, we attract students with the finest academic credentials. Year on year, applications for our undergraduate places are growing rapidly and more impressively than they are nationally or for comparable universities – in 2017, we have received almost 90,000 applications for our programmes. This year, we will welcome approximately 12,000 undergraduate and postgraduate students at home and abroad. We are committed to delivering a first-class experience for our students in every aspect of their university life.



Global outlook

Ranked 84th in the QS World University Rankings 2018, the University has a significant international presence. The University was one of the founding partners of, and remains highly active in, the Universitas 21 global network of research-intensive universities (www.universitas21.com). Our global outlook has two main components. In research, the University has a focused approach with an emphasis on key country partnerships. In China, we have developed a broad range of activities, including a signature collaboration with the Guangzhou Municipal Government, and well-developed research collaborations in many parts of the country; we also have a dedicated China Institute to further these partnerships. In Brazil, the Universities of Birmingham and Nottingham are working together in a unique collaboration to develop a network of strategic partnerships with Brazilian universities, as well as the oil and gas industry. In North America, the University has a major collaboration with the University of Illinois at Urbana-Champaign underpinned by a flourishing network of faculty-to-faculty relationships. In Australia, we have a growing partnership with the University of Melbourne, and in India, our partnerships continue to develop and have been strengthened by our Chancellor, Indian-born entrepreneur and Crossbench Peer Lord Bilimoria of Chelsea.



In international education, we have more than 1,500 students being taught on Distance Learning programmes; over 200,000 learners have taken one of our Massive Open Online Courses (MOOC), with 60 per cent of these overseas students; and we deliver University of Birmingham degree programmes in Singapore and China. We also have partnership agreements with many of the world's leading universities, and offer a range of different educational collaborations, including joint PhDs with the University of Melbourne, numerous '2+2' degree programmes, and a developing suite of Masters courses delivered in conjunction with partners around the world. The University currently has some 7,000 international students. As a University with a global mindset, we have offices in New Delhi, Brussels, Shanghai, and Guangzhou. We also developed a campus in Dubai, which opened its doors to students in September 2018. More information about our strategic global engagements and international research focus can be found on our website (www.birmingham.ac.uk/International/global-engagement/index.aspx).



Sport

Sport is integral to life at Birmingham and we are regularly ranked in the top five in the UK for the quality of student sport and are proud to count 2008, 2012 and 2016 Olympians and Paralympians among our current students and alumni. Our new sports development includes the city of Birmingham's first 50-metre swimming pool – an asset not only for our students and staff but for the wider community. We hosted the fastest man on Earth in 2012 when the Jamaican Amateur Athletic Association chose the University as the venue for their pre-Olympic training camp and they were back again in 2017 as they prepared for the World Athletics Championships in London. We worked closely with partners regionally and nationally to secure the 2022 Commonwealth Games in Birmingham and are delighted to have been chosen as the venue for both Hockey and Squash.



Structure

The University structure compromises five Colleges – College of Life and Environmental Sciences, College of Medical and Dental Sciences, College of Engineering and Physical Sciences, College of Social Sciences, and College of Arts and Law – each with a distinctive identity and areas of renown.



Science, Technology, Engineering and Medicine

The University of Birmingham is renowned across the STEM disciplines. Across the breadth of life and environmental sciences, we discover, apply and translate science, forging major advances in human and environmental health. Our pioneering research and education play a leading role in addressing the most significant human and environmental questions of the present, past and future. From exercise, biomedicine and mental health to climate change, food security, and resilience, we combine original thinking and real-world experience with clear focus and rigour.



Long established as a pioneer in the field of medicine, Birmingham scientists were the brains behind the first heart pacemaker, the use of aspirin and the synthesis of Vitamin C. 'Great minds, in the right location' sums up our unique combination of cutting-edge laboratory work, clinical expertise and first-class surgical facilities all housed on one vast life sciences campus. The Institute of Translational Medicine (ITM) builds on Birmingham's excellent track record in clinical trials and is helping to progress the

very latest scientific research findings from the University into enhanced treatments for patients across a range of major health issues. Bringing together the University, the University Hospitals Birmingham NHS Foundation Trust, and Birmingham Women's and Children's Hospital, through the Birmingham Health Partners, it is increasing capacity and enabling more patients to be co-located alongside clinicians and researchers. This vision is reflected in Birmingham's ambitious project to create a 12-acre science park, specifically for the life sciences, adjacent to the University and Hospital to attract cutting-edge health research firms into the city, driving economic growth alongside medical and scientific innovation. These investments reinforce the University's position today as a world leader in, for example, the development of new treatments for cancer, heart, and liver disease, as well as innovative transplant technologies and new drugs to combat antibiotic resistance.

Experts from across a breadth of disciplines from the biomedical to the social sciences engage to address shared research challenges and to deliver research-led teaching to our students.

In the Life and Environmental Sciences, our world-leading collaborative research areas include: Environmental Sciences; Microbiology and Infection; Centre of Precision Rehabilitation for Spinal Pain; Centre for Human Brain Health; Institute for Mental Health; Water Sciences; Birmingham Institute of Forest Research (BIFoR).

In Engineering and Physical Sciences, we boast outstanding academic and research credentials, including Chemical Engineering and Railway Engineering, in which we were recognised with two Queen's Anniversary Prizes. In Physics, we received investment of £80 million to develop Quantum Technologies. Our substantive links with industry include a £60 million investment from Rolls-Royce and the Higher Education Funding Council for England (HEFCE) to develop the world-leading High Temperature Research Centre, a £60 million investment for the Energy Research Accelerator, and most recently, £92 million from government and industry to establish a UK railway research partnership.

Global challenges

Given the challenges that societies from across the globe are facing, there has never been a more important time to understand the mechanisms that underpin these interactions. We are currently leading international collaborative projects that are specifically addressing areas such as:

- Healthy Environments
- Food and Sustainable Agriculture
- Water Security
- Clean Energy
- Conflict and Humanitarian Action
- Foundations for Economic Development (including infrastructure)
- Resilient Systems
- Mass Migration
- Antibiotic Resistance
- Sustainable Cities

The newly founded Institute for Global Innovation has been established to support interdisciplinary research in global challenge areas such as the above.







Social Sciences

Social Sciences has an active research, knowledge transfer and consultancy culture, grounded in the academic framework of social sciences and always focused on issues of public concern. Interdisciplinary by nature, our work has local, national, and global impact and is focused around a number of specialist research institutes including the Institute for Conflict, Cooperation and Security, Institute for Research into Superdiversity, the Centre on Household Assets and Savings Management (CHASM), and the Jubilee Centre for Character and Virtues, which is based within our outstanding School of Education.

We have also developed a broad range of initiatives, focused on enhancing, supporting, and developing public sector services across the city and nationally. The Public Service Academy (PSA) brings together the University's teaching, research, consultancy and knowledge transfer expertise in public services. Working with a range of key public service partners, including Birmingham City Council, our work is focused on key themes including cohesion, health and well-being and localisation. Our Health Services Management Centre provides a combination of research, teaching, professional development, and consultancy to health and social care agencies and has established a unique reputation as a 'critical friend' of the healthcare community. The Institute of Local Government Studies (INLOGOV) is the leading UK centre for the study of local public service management, policy, and governance. With more than 40 years of experience working within local government and the public sector, it shapes the very latest thinking for public servants. Our Business School is one of only a handful of the world's business schools to hold the gold standard of 'triple-crown' accreditation from the AACSB (Association to Advance Collegiate Schools of Business), AMBA (Association of MBAs) and EQUIS (European Quality Improvement System). It is also consistently ranked in global ranking tables.



The University's arts and humanities researchers are among the very best in the UK, highlighting our world-class research programme. Philosophy, History, Classics, Theology and Religion, and West African Studies are among the top-ranked departments in the country and recognised for bringing significant benefits to society.

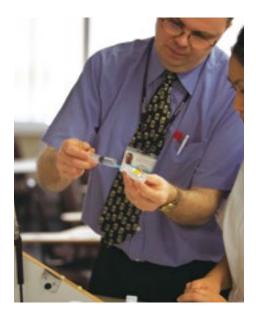
The arts and humanities, and University life in general, are enhanced by a rich set of cultural assets that include the Shakespeare Institute in Stratford-upon-Avon, which has direct working links with the Royal Shakespeare Company; the Ironbridge Institute in Shropshire, and the Barber Institute of Fine Arts – our own art gallery that houses works by many of the greatest artists in the western tradition. The Edgbaston campus also includes Winterbourne House and Garden, a unique Edwardian heritage attraction that is home to more than 6,000 plant species from around the world. Our cultural profile was significantly enhanced with the opening of the Bramall music building in 2013. This houses the Elgar Concert Hall, named after our first Professor of Music, Sir Edward Elgar, and is a striking venue that complements our global reputation in music, attracting some of the most talented musicians from across the world to study here.

Partnership with business and industry

The University is one of the leading Higher Education Institutions in this country for partnership with business and industry. According to the 2018 Reuters' ranking of the 'most innovative universities in Europe', the University was the sixth highest placed UK university, and 34th in Europe. Our new research contracts with UK and international business exceeded £20 million in 2017–18, and the University has capitalised on the







opportunities from the Industrial Strategy Challenge Fund with major grants to our National Centre for Nuclear Robotics (£43 million), and from the Faraday Institution to lead a programme on recycling of lithium-ion batteries. Our substantive links with industry also include a £60 million investment from Rolls-Royce and the Higher Education Funding Council for England (HEFCE) to develop the world-leading High Temperature Research Centre, a £60 million investment for the Energy Research Accelerator partnership, and most recently, £92 million from government and industry to establish a UK railway research partnership, including a major investment from Siemens. In the Social Sciences, the recently established 'Lloyds Banking Group Centre for Responsible Business' is an interdisciplinary research and engagement space exploring how businesses can be 'rewired responsibly' to inform, shape and energise the Responsible Business Revolution. The development of strategic partnerships with business and industry is supported by the University's 15-strong Business Engagement team who pro-actively support relationships to co-create funding opportunities.

University of Birmingham Enterprise manages the University's technology transfer operations, academic consultancy, spin-out company set up, business incubation, and facilities at the Birmingham Research Park. It provides an end-to-end service for academic innovators, including practical and financial support for proof of concept studies and market research, training for academics, incubation services and facilities for hi-tech and biomedical startups.



The city of Birmingham has undergone a major transformation in the last decade and regularly features as a top place to visit – in fact, it was the only place in the UK listed in the Rough Guide's Top 10 places in the world to visit in 2015. In a recent *Sunday Times/Zoopla* report 'Best Places to live in Britain', three areas of Birmingham all made the top 50 best places to live in Britain, with the suburb of Moseley being voted the overall winner.

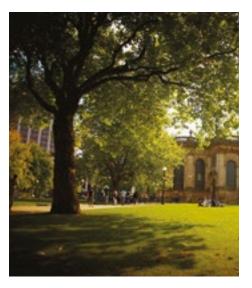
A city of historical interest and contemporary vision, Birmingham has a rich and diverse community that creates a vibrant, multicultural, and exciting place to live and work.

The city is home to the internationally renowned Birmingham Royal Ballet and one of the world's greatest concert venues: Symphony Hall. The City Museum and Art Gallery houses the world's finest collection of Pre-Raphaelite paintings, alongside a major collection of Old Masters, Modern and Contemporary pictures, while the iconic Bullring is one of the largest dedicated shopping facilities in Europe. Sports and recreation are also well served; the city offers international Test cricket, high-level football, international championship golf and tennis, and top-class rugby. As a multicultural city, Birmingham is also renowned for the breadth of its cuisine and has more Michelin-starred restaurants than any other English city outside London.

Birmingham is within an hour's drive of Stratford-upon-Avon and the Cotswolds. From Birmingham Airport, more than 50 different airlines operate scheduled services to 100 destinations worldwide. The University has its own dedicated railway station, while 50 million passengers a year use Birmingham New Street Station, and the city will be a major hub for the high-speed rail network. London is 80 minutes away by shuttle service, with trains every 20 minutes.







Industry Professorial Fellowships Scheme

The University of Birmingham Industry Professorial Fellowships Scheme aims to recruit individuals who will develop substantial research capability and strengthen collaborative research links between the University, targeted sectors of industry and specific businesses. It is expected that they will not only lead their own collaborative research programmes with industry, but will also facilitate broader engagement between other researchers at the University with business and industry. They should aim to boost the University's research income by attracting funding both from industry and also from appropriate collaborative Research Council/Innovate UK schemes (eg, EPSRC Prosperity Partnerships). It is also expected that individuals will draw on funding sources available via the Industrial Strategy challenge fund.

The appointed individuals may be moving from a senior industry Research & Development (R&D) post, a consultancy role with industry R&D, a senior post at a government research laboratory with close industry links, a unit allied to a university (eg, a Catapult) or be working closely with industry already in a position at a higher education institution. In this context, 'working closely with industry' could involve having launched one or more spin-out companies with which they continue to have a close association.

The postholder will have R&D experience at a level commensurate with the appointment to a full chair. Where appropriate they will demonstrate this through their publications, patents and other outputs, and research grant income. It is recognised that in some cases the appointee will not have a standard academic research track record, for example because of the confidential nature of the work within their current posting. Nevertheless, they will need to demonstrate through confidential discussions and/or interviews the high level of research and innovation that they have been leading.

While in many cases the appointee is likely to be working in the area of physical sciences and engineering, life sciences or medical sciences, the University is open to appointing individuals with academic expertise in other disciplinary areas, such as economics, management, law, behavioural or health economics, who work closely with business and industry.

We expect that the appointee will wish to contribute to teaching in one or more of the University's Schools and Colleges. Taught elements are now incorporated routinely into higher research degrees and naturally the University offers a full range of taught degrees. In addition, the benefits of supervising final-year projects will be obvious in terms of attracting future research students to the areas of interest of postholders.

The fellowship aspect of the proposal will provide the appointee with ringfenced time for the first three years to develop their research partnership with industry at the University. Thereafter, they will move into a 'normal' academic position at chair level on a permanent basis.







Job outline

Job summary

As an Industry Chair, you will be expected to lead strategic research programmes that develop and strengthen collaborative links between the University and targeted sectors of industry or specific businesses. It is expected that you will not only lead your own collaborative research programmes with industry, but will also facilitate broader engagement between other researchers at the University with business and industry. You should also aim to boost the University's research income by attracting funding both from industry and also from appropriate collaborative Research Council/Innovate UK schemes (eg, EPSRC Prosperity Partnerships) or other public funders. It is expected that you will draw on funding sources available via the Industrial Strategy challenge fund.



Main duties

The responsibilities are likely to include some but not all of the activities outlined below.

Research

- Lead the development of collaborative research programmes with internal and external partners, that maintain and further develop your international reputation as a research leader working at the interface between university and business/industry
- Lead and support external funding bids that develop and sustain research support for your specialist areas and advance the reputation of the academic units as well as the University
- Lead the process of acquiring, analysing and interpreting research data, knowledge and information, ensuring appropriate techniques, approaches, models and methods are selected, developed or devised for the purpose
- Participate in and organise national and/or international workshops and conferences to further disseminate and explain research findings
- Contribute to the development and implementation of research strategy within your discipline(s) and more broadly in the University, especially in relation to the interface with business and industry

Learning and teaching

- It is expected that the appointee will wish to contribute to teaching in one or more of the University's Schools and Colleges. Taught elements are incorporated routinely into higher research degrees and naturally the University also offers a full range of taught degree programmes. The benefits of supervising final-year projects in attracting future students to areas of research interest of the postholder will be self-evident.
- Contribute to and/or lead the development of the curriculum in areas relevant to your own expertise; demonstrate innovative/leading edge approaches to learning that achieve the educational standards of the School/ Departments and, where appropriate, professional bodies. Disseminate best practice in teaching and learning methodologies within and outside the University.





Management/administration

- Plan and lead the development and implementation of research strategy within your discipline.
- Develop and communicate a clear vision of the academic unit/University's strategic direction and ensure the delivery of University strategic plans within area of responsibility.
- Chair committees and participate in University decision-making and governance, and contribute to the development of academic policies across the University.
- Provide intellectual leadership of the School's academic community, providing direction and mentoring for less experienced colleagues of the academic communities of one or more schools especially with regard to building business-industry relationships. Lead, appoint, manage and develop individuals and/or teams to deliver the research and/or teaching plans. Foster inter-disciplinary team working to develop team spirit and team coherence.
- Take responsibility for the management and resolution of student and/or team issues drawing on specialist advice and support as required.
- Take responsibility for the organisation and deployment of resources within area of responsibility.
- Contribute to the running and strategic direction and development of the University through designated committees or project activities.
- Participate on national and international bodies; act as an advisor to government and in any other external advisory capacity; contribute to the development of higher education processes in the UK.

Person specification

You may be moving from a senior industry Research & Development (R&D) post, a consultancy role with industry R&D, a senior post at a government research lab with close industry links, a unit allied to a university (eg, Catapult) or be working closely with industry already in a position at a higher education institution. In this context, 'working closely with industry' could involve having launched one or more spin-out companies with which you continue to have a close association.

You will have R&D experience at a level commensurate with the appointment to a full chair. Where appropriate, you will demonstrate this through your publications, patents and other outputs, and research grant income.

It is recognised that in some cases you will not have a standard academic research track record, for example, because of the confidential nature of the work within your current posting. Nevertheless, you will need to demonstrate through confidential discussions and/or interviews the high level of research and innovation that you have been leading.

While you may to be working in the area of physical sciences and engineering, life sciences or medical sciences, the University is open to appointing individuals with academic expertise in other disciplinary areas, such as economics, management, law, behavioural or health economics, who work closely with business and industry.







Skills and experience

- PhD qualified or equivalent
- Extensive and high-level research and/or innovation experience, either in industry/ business, or at the interface between university and business, at a level that is appropriate for appointment to a Chair
- Experience of generating and developing proposals for research funding as appropriate to career history
- Experience of leading major research and/or innovation teams and programmes
- Membership of a professional body where appropriate
- A sustained record of invited talks at international conferences/events (as appropriate to career history)
- Reviewer for national and international research and innovation bodies
- Evidence of leading collaborative and effective research links between partners in different organisations especially between universities and business/industry

Research

- A sustained record of international excellence over career to date, demonstrated through your publications, patents and other outputs, and research grant income.
- For those with a career based primarily in academia, a sustained record of successfully completed postgraduate research supervision to doctoral level. For those with a career in industry, experience of long-term supervision of early-career researchers or students on placement.
- Sustained track record of success in knowledge creation and exchange to improve the performance of business and wider stakeholders.
- Extensive experience of fostering academic-business collaboration.
- Experience of mentoring research activity of junior staff.

Teaching

- Demonstrable excellence in teaching and education, demonstrated through suitable teaching performance indicators or leading on training delivery (where appropriate to career history)
- Identification of new areas of research-led teaching

Citizenship

- Commitment to the promotion of equal opportunities
- Membership of appointment, assessment or advisory committees at other organisations
- A record as a 'good citizen' who recognises the need to foster collegiate endeavour and a sense of academic fellowship
- Experience of providing expert advice to colleagues, students and external bodies (eg, local and central government)
- A record of leadership in supporting and managing staff

Planning and organising

- Skills in managing projects and working collaboratively with fellow scholars
- Experience of resource planning and management
- Ability in strategic planning, showing effective implementation and evaluation
- A record of organising effective, new and original research programmes







Decision-making

Ability to:

- Solve problems creatively and effectively
- Develop research and innovation ideas
- Decide how to develop and undertake research strategy
- Decide where and when to present research findings and what publications and conferences to target for this purpose

Internal/external relationships

- Experience of working within global networks
- Evidence of agenda setting in research through eg, participation/advisory roles in professional or government bodies
- Engagement with external bodies to enhance national or international standing of the discipline
- Successful collaboration with other universities and/or businesses

