

THE UNIVERSITY of EDINBURGH



Appointment of Head of School of Engineering

Candidate Briefing Pack October 2023

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Contents

- 3 Welcome!
- 4 About the University of Edinburgh
- 5 About the College of Science and Engineering
- 6 Our Strategy
- 7 School of Engineering
- 9 Head of the School of Engineering
- 11 The Person
- 12 Further Information and How to Apply







Welcome!

Welcome from the Head of the College of Science and Engineering.

I'm delighted that you have shown an interest in this Head of School role at the University of Edinburgh and look forward to engaging further with you in exploring the opportunities offered by it.

Heads of School provide essential leadership for all aspects of the School's activities as well as having an extremely important part to play in the governance and management of the wider College and University, and we are looking for someone who can be effective across all these spheres working in a collegial way.

The School of Engineering can trace its beginnings at the University of Edinburgh to 1868, when Queen Victoria appointed the first Regius Chair of Engineering at Edinburgh – the oldest such position in the UK. The present School of Engineering was formed in 2002 from the previous departments of Chemical Engineering, Civil and Environmental Engineering, Electronics and Electrical Engineering, and Mechanical Engineering. Since then, the School has gone from strength to strength, growing rapidly in the last 10 years and now offers undergraduate degree programmes across all disciplines, taught Masters degrees in specialist areas and an enviable breadth and depth of research addressing global challenges.

The academics and professional services staff in the School have tremendous expertise and commitment and you'll work closely with them and the student body to shape the next phase of the School's development. You will also receive strong support from the University Principal, Provost, Head of College, and the wider College and University management teams in taking your plans forward.

I look forward to discussing the post with you further.

Professor Iain Grant Gordon FRSE

Vice-Principal and Head of College of Science and Engineering



About the University of Edinburgh

At the University of Edinburgh, we've been influencing the world for more than 400 years. Each year we take on tomorrow's greatest challenges. Each year is different – every person, teacher, project, and every thought more exciting than the last.

Whatever excites you, whatever your ambition, whatever makes you 'you', we know one thing: nothing ordinary comes from this extraordinary place. At Edinburgh, you'll be in good company, doing good things, for the good of the environment and the world.

Driven by this passion, we've affected and empowered every one of our community. We believe this is possible because of a unique mix of three factors:

- **Place:** The city of Edinburgh is famous for changing the way the world is understood. Its history and reputation rub off on us, every day. It inspires and lifts our expectations of what is possible.
- **People:** Our staff, students, leaders and partners are talented, courageous, engaging and brilliant and down-toearth. They value wisdom, laughter, character – and each other.
- **Practice:** We're an encouraging space to explore, but at the same time, our research, teaching, and even our daily processes, are ambitious. We, and our global business partners, inspire you to aim high, push frontiers, deliver economic impact, drive sustainability. We're bold and our results change the world.

Where our place, people and practice meet, this is The University of Edinburgh.

As a world-leading research-intensive University, we are here to address tomorrow's greatest challenges. Between now and 2030 we will do that with a values-led approach to teaching, research and innovation, and through the strength of our relationships, both locally and globally. Edinburgh is a truly global university and we have always had a community in which students feel valued and welcome.

The University has more than 46,000 students matriculated during the 2022/23 academic year, and 11,900 of those students are based in the College of Science and Engineering. Students from all over the world choose to study at Edinburgh, attracted to the quality of our education and research portfolio, but also our city, our community and our international culture. With 21 schools across the three colleges, the University has a diverse and attractive portfolio of highly ranked courses on offer.



About the College of Science and Engineering

Science has been taught at Edinburgh since the sixteenth century, when it was known as 'natural philosophy'. The seventeenth century saw the institution of the University Chairs of Mathematics and Botany, followed the next century by Chairs of Natural History, Astronomy, Chemistry and Agriculture.

During the eighteenth century, the University was a key contributor to the Scottish Enlightenment and it educated many of the leading scientists of the time. Many famous and important alumni have studied here including Charles Darwin.

The College of Science and Engineering is now one of the largest science and engineering groupings in the UK. Most of the College has been located for over 100 years on a 35 hectare campus of its own at the King's Buildings about 2 miles south of the city centre. The College is in the front rank of UK University science and engineering groupings for research quality and research income and is a key player in European and overseas research collaborations. We conduct research of the highest standard across a broad spectrum of disciplines and whilst our discipline-specific research is impressive, we also focus on challenging our researchers to explore the space between traditional disciplines, creating transformational discoveries that enrich society.

The College is home to seven of the University's 21 schools. During 2022/23, the College had 11,900 students, comprising of: 7,550 undergraduate; 2,060 taught postgraduate; and 2,290 research postgraduate. The College currently employs 4,298 staff (2,709 FTE).

College mission

We discover, develop and share knowledge. As a centre of academic excellence, we aim to:

- · provide the highest-quality research-led teaching and learning;
- challenge the boundaries of knowledge, research and disciplines;
- · enable our graduates and staff to be exceptional individuals equipped to address global challenges;
- · promote good health, economic growth, cultural understanding and social well-being.

Our thematic areas of focus:

- building on our success in data science and AI;
- transforming collaborative research and translation in healthcare and biomedical science and engineering;
- placing environmental sustainability and climate change at the heart of what we do, creating a community that integrates research, teaching and practice.

https://www.ed.ac.uk/science-engineering/about



Our Strategy

The University of Edinburgh Strategy 2030 is rooted in our values, and led by a distinctive, honest and realistic set of guiding principles to deliver excellence in 2030.

We strive to:

- be a place of transformation and of self-improvement, driven to achieve benefit for individuals, communities, societies and our world;
- be diverse, inclusive and accessible to all;
- be ambitious, bold and act with integrity, always being willing to listen;
- have a strong sense of community, fostering a sustainable environment in which staff, students, alumni and friends are proud to be part of our University;
- attract the world's best minds to come to study and work with us, while building innovative global partnerships for research, teaching and impact;
- · celebrate and strengthen our deep-rooted and distinctive internationalism;
- sustain a deep allegiance and commitment to the interests of the city and region in which we are based, alongside our national and international efforts.

Creating new opportunities for partners, friends, neighbours, and supporters to co-create, engage with the world, and amplify our impacts is at the forefront of our thinking and activity.

Strategy 2030

School of Engineering

The School of Engineering at the University of Edinburgh can trace its beginnings back to 1868, when Queen Victoria appointed the first Regius Chair of Engineering here – the oldest such position in the UK. Today, the 2021 Research Excellence Framework (REF) exercise, based on our joint submission with Heriot Watt University, ranks us as 1st in Scotland and 3rd in the UK for the quality, scale and breadth of our research (Times Higher Education Research Power index).

Over the last 10 years our School has gone from strength to strength, growing rapidly and is now one of the largest schools in the University with 430 staff and over 2,650 students. It offers undergraduate degree programmes across all engineering disciplines, taught Masters degrees in a range of specialist areas and an enviable breadth and depth of research driving future technology and addressing global challenges. The School currently has an annual turnover of £60M comprising research grant income of ~£15M, REF/REG income of £6M, student fee/teaching income of ~£35M and ~£5M commercial income.

The School has always attracted world class academic staff, and currently includes 7 Fellows of the Royal Academy of Engineering (RAEng), 17 Fellows of the Royal Society of Edinburgh, 3 prestigious RAEng Chairs in Emerging Technologies and the Canon Medical/RAEng Research Chair in Healthcare AI and has attracted 7 ERC research awards and currently hosts 20 competitively won Research Fellowships.

Research

Our world class research status enables us to tackle major societal challenges and create future underpinning technologies, pursuing cutting-edge research across the entire field of engineering, from the nano- to the macro/global scales. Our research ranges from the design and deployment of novel nanotechnology for biological monitoring and medical diagnosis, to novel superconducting electrical machines. We are developing new electronic and optoelectronic technologies, including novel photon-counting image sensors and "beyond CMOS" nanoelectronics. Today AI and data driven solutions pervade our engineering research in almost all sectors from next generation communications to future manufacturing and construction.

In supporting the UK's transition to a low carbon future, we are researching into a range of energy solutions through major research awards from EPSRC and the EU, including carbon capture and storage, offshore wind and marine energy systems, as well as training over 56 industrially focused research engineers through our award-winning centre for doctoral training in offshore renewable energy (IDCORE). In environmental research, we are optimising the security and sustainability of the built environment and developing engineering solutions to address the impact of climate change.

Innovation and Impact

The School has an enviable track record in successfully translating research into real-world outcomes, having produced more than 50 technology spin-outs and developed deep links with key industrial partners such as Leonardo UK and Canon Medical. This includes winning the Rank Prize in optoelectronics for the development of the first CMOS image sensors for digital cameras, today used in over 1 billion mobile phones, and spin-out Artemis Intelligent Power, winner of the MacRoberts Award - the UK's longest running and most prestigious prize for engineering innovation - for their revolutionary digitally controlled hydraulics technology.

Whether creating advanced engineering structures or influencing fire safety standards in buildings, our research delivers critical societal, economic and environmental impact. We strive to provide our staff and students with opportunities to engage with external partners and stakeholders to maximise the reach and significance of their research.

https://www.eng.ed.ac.uk/research/impacts/

School of Engineering

Teaching

Engineering is committed to excellence in teaching, delivering programmes at all levels: 16 accredited Undergraduate programmes (BEng and MEng) spanning four teaching disciplines; 10 MSc programmes; and 2 Centres for Doctoral Training programmes. These include programmes that are offered jointly with other Schools in the University, as well as partner institutions in the UK and Europe. The School holds a Chair of Technology Enhanced Science Education, researching and developing award-winning remote laboratories (https://practable.io/) focused on Engineering applications. The School is currently undertaking a multi-year curriculum renewal project, with 2024 seeing our first intake of the fully renewed Undergraduate programmes. These have been shaped through our Industrial Liaison Boards, and our partners that offer Industrial Placements on some of our programmes. Students are supported by a team of dedicated Student Advisers, and University services including the School Wellbeing Adviser, Careers service, and specialist support.

The School has an active outreach programme working with local schools through Primary Engineer, developing collaborative programmes with Fife College, working with the Sutton Trust summer school, and supporting students entering the F1 Schools competition. Through the University Curriculum Transformation programme the School has co-developed the "Sensing in the Community" course that works with a local Charity to develop support for patients. In addition, our students have established a student led group, "Engineering for Change", involved in practical projects both in the UK and worldwide, and are regular contributors to other groups such as "Hands On" focusing on STEM outreach.

International Outlook

We are an outward-looking School with an extensive network of international partners in both teaching and research. This includes our offering of joint degrees at both undergraduate and postgraduate levels, which allow students from overseas universities to spend time studying at the University of Edinburgh under 2+2, 2+3 and 4+1 schemes, and often gain degrees accredited by both institutions. So far, we have produced over 500 graduates from 15 partnerships with universities across China and India and we are developing new partnerships with institutions in Sri Lanka and the UAE. Two notable partnerships are those with Shanghai Jiao Tong University, established in 2017 to enable joint research, educational and knowledge transfer activities between the two universities and the UK – China Low Carbon College, and with Pontificia Universidad Católica de Chile, which allows students to graduate with a dual PhD from both institutions. International students currently constitute about 40 per cent of our undergraduate student population, most of our postgraduate taught student population and about half of our postgraduate research students.

Equality and Diversity

We aim to ensure that our culture and systems support flexible and family-friendly working and recognise and value diversity across all our staff and students. The School has an active programme offering support and professional development for all staff, providing mentoring, training, and networking opportunities, and holds a bronze Athena SWAN award, in recognition of our commitment to advancing gender equality in higher education and research. In 2022, the School launched the inaugural Elizabeth Georgeson Research Fellowships which support early-career postdoctoral researchers from backgrounds that are currently under-represented in engineering research and academia, with the aim to support their development and prepare them for future independent roles in academia and beyond.

Estate

The School occupies 15 buildings on the King's Buildings (KB) campus in south Edinburgh and has over 60 laboratories and workshops. It also hosts a number of world leading research facilities including FloWave, the world's first circular combined wave and current facility that has helped cement our leading position in offshore renewable energy, the Scottish Microelectronics Centre, with class 10 cleanrooms capable of processing sub-micron CMOS and fabricating a wide-ranging set of non-silicon based microsystems, and FastBlade, the first regenerative fatigue test facility based on Edinburgh's own digital hydraulics technology.

Plans are underway for a new £52M Engineering Building at KB that is set to deliver 6,500 sqm of state-of-the-art estate in 2026. Staff and students also benefit from the recently opened Nucleus building at the heart of KB campus – a major development which provides new learning, teaching and social spaces for the College of Science and Engineering.



Head of the School of Engineering

This post provides an exceptional opportunity for an innovative academic of international standing to play a key role in shaping the future of the School to increase its global impact and contribution to society.

Reporting into the Head of College, the Head of School carries with it a significant set of accountabilities for which the Head is responsible, through the Head of College, to the Provost, Principal, and, ultimately, the University Court. These include a shared responsibility for College and University interests as well as statutory responsibilities and legal responsibilities. Equally important, the role embodies a set of responsibilities to, and for, all staff and students in the School, including ensuring that their 'voice' (or sometimes voices) are heard and heeded in both College and University processes and that the development of the School, in human and academic terms, is fostered and supported.

Candidates may come from a variety of backgrounds but must have an international research reputation and significant management experience, in order to provide both academic and executive leadership of the School.

Job Purpose

The Head of School will provide strategic leadership to the School, with a key role in shaping the future of the School to increase its global impact and contribution to society. The Head of School will deliver cross-cutting strategies around people, innovation, commercialisation, knowledge exchange and sustainability. The Head of School is responsible for the management of the School and all of its resources – people, finance and physical infrastructure.

In addition to providing overall academic leadership within the School, Heads of School are expected to retain a role in teaching and research as an integral part of their role throughout their term of appointment.

The time commitment to be devoted to different aspects of the Head of School role and any additional support to be provided over the duration of the appointment (such as additional research, technical support and/or administrative support) will be discussed and agreed between the Head of College and the incoming Head of School and documented as part of the appointment process.



Summary of Key Duties and Responsibilities

- Provide strategic leadership in learning and research, including developing a shared vision for the School that embodies the necessary agility and flexibility to enable the School to adapt to internal and external change.
- Oversee School operations to ensure the smooth running of School business on a day-to-day basis, directing senior staff as appropriate and delegating as necessary.
- Contribute to the development of College and University plans and develop the School plan in line with overall College and University strategy. Set and monitor goals and performance standards to optimise the deployment of all of the School's resources – people, finance and physical infrastructure, in support of School, College and University objectives, ensuring corrective action is taken where necessary.
- Continue to improve on the quality and quantity of research and development of research collaborations and partnerships within the College, wider University and externally.
- Foster and cultivate modern and innovative delivery of teaching and learning activity for all students. Ensure that the highest standards of student satisfaction are attained across all areas of School activity.
- Create a positive and collegiate environment that promotes and supports equality, diversity and inclusion and places emphasis on open communication, where all students and members of staff are engaged, and their contributions are encouraged and recognised.
- Where change is needed, lead through effective communication of the vision for the School, ensuring staff understand and embrace the need for change and their role in contributing to the goals of the School, College and University.
- Fulfil an ambassadorial role for the School, College and University, working with relevant School colleagues and
 professional support units to facilitate, establish and maintain productive relationships with external stakeholders to
 maximise any available opportunities. External stakeholders are likely to include academic collaborators, alumni,
 donors, industry and commercial partners.

The Person

Experience

Essential:

- An outstanding personal record of University-level teaching, research (including research funding awards), and knowledge exchange; internationally recognised in at least one of the School's core disciplines.
- Significant experience of operating in an academic environment and an understanding of the demands of worldclass research scholarship and teaching across the range of disciplines present within the School.
- Demonstrated ability to provide visionary, academic, strategic and operational leadership and management, and demonstrated ability to foster a collegiate work environment.
- Ability to develop plans, set and monitor objectives. Successful track record of leading change.
- Comprehensive understanding of the sector, including the national and international context in which the School's disciplines and University operate.
- Established reputation with appropriate external funding, academic and policy-making agencies, and experience in development and fundraising.
- Able to operate successfully in a collegial and consultative environment while being decisive and demonstrating strength of purpose internally and externally.
- Successful track record of leading initiatives which foster and embed a strong student-focused culture that enhances teaching quality and the student experience, as well as in the development of innovative teaching methods with a particular focus on online education and other forms of knowledge exchange.
- Experience representing the Institution externally or working with external bodies e.g. academic collaborators, alumni, donors, industry and commercial partners.

Desirable:

- Knowledge of financial management of a large academic unit.
- Understanding of student affairs e.g. student support issues and associated provisions, role of student welfare committees, etc.
- Experience chairing or convening committees at University or College level (or equivalent for external applicants).
- Experience representing the School on College wide bodies or the College on University wide bodies (or equivalent for external applicants).

Personal Attributes

- Strong leadership and management skills with the ability to empower, enable, motivate and challenge.
- Excellent interpersonal, influencing and brokering skills with the ability to build partnerships internally and externally.
- Sound judgment, diplomacy and tact.
- The ability to maintain the strong, cohesive community from the diversity of talent within the School.
- Demonstrable commitment to delivering social responsibility and sustainability across business operations.



Further Information and How to Apply

The successful candidate, if they do not already hold a Chair with the School, will also be appointed to a Chair, which will be the successful candidate's open-ended post. The Headship of the School is normally undertaken for an initial period of 5 years, with the possibility of an option to extend by mutual agreement for a further period.

The University will be supported in this appointment process by the executive search firm Veredus. Veredus will support the panel in the discharge of its duties, both to assist in the assessment of candidates against the requirements for the role and to identify the widest possible field of qualified candidates. We are committed to equality, diversity and inclusion, and applicants from minority groups are particularly welcomed.

Applications should be uploaded at https://www.veredus.co.uk/jobs/ quoting reference **14145** by **09:00 (GMT) on Monday**, **27**th **November 2023**.

Applications should consist of a full curriculum vitae along with a covering letter of application addressing the role and the qualities and experience outlined. Candidates are also asked to submit completed Equal Opportunities Monitoring and Candidate Supporting Information forms, which can be downloaded from the Veredus job page.

The University is willing to consider flexible working or job share arrangements for this appointment. Please provide detail of your requested working pattern as part of your application. Job sharing applicants should complete separate applications and indicate that they are applying as job sharers and give the name of their partner.

All submissions will receive an automated response. If you do not receive confirmation of receipt when submitting your application, please contact us on <u>education@veredus.co.uk</u>.

Longlisted candidates will be invited for interview with Veredus, to be held between 18th December 2023 and 18th January 2024, following which the panel will agree a shortlist. Shortlisted candidates will be invited to attend informal visits w/c 26th February and focus group and final panel interviews in Edinburgh on 4th and 5th March 2024.

For a confidential discussion about the role, please contact our advising consultants at Veredus:

- James Griffin on 07736 491 816
- Veronika Dergal on 07547 769 762
- Natalia Starik-Bludova on 07717 003 792

At Veredus, we take care to protect the privacy of our candidates and clients. To read more about how we collect, store and share your data please review our privacy notice: <u>https://www.veredus.co.uk/privacy-policy/</u>

Please visit the following link in order to find more information about the use of personal information provided by candidates to the University of Edinburgh: <u>https://www.ed.ac.uk/data-protection</u>