Teaching and Scholarship Lecturer in Mechanical Engineering

Electronic Engineering

Closing date: 30 May 2019

Interview date: To be confirmed

Vacancy reference: 7587
INTRODUCTION

In line with the Department of Electronic Engineering’s long-term plans for expansion, we are seeking to appoint two Lecturers to provide teaching support for our new suite of Engineering related degree programmes.

We welcome applications from candidates with expertise in mechanical engineering, fluid mechanics, manufacturing & fabrication and materials.

You will be involved in developing new teaching focused on these particular areas within the Engineering suite of programmes.

The responsibility of this post will include designing and leading modules in Materials & Mechanical Engineering, Thermodynamics and Fluid Dynamics, Manufacturing and Fabrication, Micro-Electro-Mechanical Systems (MEMS), Microfluidics and Composite Materials, creating teaching material and designing and running relevant laboratories, marking, supervising students and providing supervision across a range of projects.

This is an exciting time to join the Department with an opportunity to contribute to the development of our teaching going forward.
Main purpose of the role

- To lecture, lead seminars, tutorials and other forms of graduate and postgraduate teaching.
- To develop laboratories that support, stretch and motivate students.
- To develop and apply innovative and appropriate teaching techniques and material which create interest, understanding and enthusiasm amongst students.
- To carry out on-going curriculum review, including teaching content and materials and contribute to the development of teaching and learning strategies.
- To undertake effectively a range of administrative and managerial responsibilities.

Key responsibilities
(Role holders will normally be required to undertake the duties below)

Teaching and Promotion of Learning

- To support the teaching objectives of the Department by delivering teaching through allocated lectures, laboratories, tutorials and other forms of undergraduate and postgraduate teaching.
- To set and mark coursework and examinations, providing constructive feedback to students.
- To ensure the quality of the design of existing teaching content, continually monitoring, evaluating and revising them to ensure excellence and coherence, identifying areas where current provision is in need of revision or improvement.
- To develop teaching and learning activities in the Department and deliver teaching across a range of modules and to all levels, through lectures, tutorials, laboratories and seminars.
- To oversee, develop and promote innovative teaching and learning approaches and material, which create interest, understanding and enthusiasm amongst students.
- To ensure that teaching design and delivery comply with the quality standards and regulations of the University and Department.

Administrative and support responsibilities

- To act as internal examiner for undergraduate and postgraduate students.
- To directly supervise students, students’ projects and academic activities. To provide expert advice on learning best practice and helping with learning problems. To identify the learning needs of students and define learning objectives.
- To contribute to planning and teaching design across a range of modules and to the administration and management of teaching programmes.
- To engage with internal and external activities that contribute to the smooth and collegial operation of the University.
- To undertake administrative and managerial responsibilities as requested by the Head of Department.

Involvement in scholarship and development

- To investigate innovative teaching, learning and assessment methods, and techniques in the sector generally, bringing new insights to the Department.
- To disseminate excellent teaching practices, e.g. through discipline or inter-disciplinary groups both within and beyond the University.
## PERSON SPECIFICATION

### Qualifications

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<tr>
<th>Essential / Desirable</th>
<th>Qualifications</th>
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<tbody>
<tr>
<td>Essential</td>
<td>PhD in mechanical engineering or equivalent experience</td>
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<td>Essential</td>
<td>Appropriate academic professional and teaching qualification or a willingness to complete the Postgraduate Certificate in Academic Practice</td>
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<td>Desirable</td>
<td>Undergraduate degree in mechanical engineering or a related discipline</td>
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### Knowledge

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<tr>
<th>Essential</th>
<th>Knowledge</th>
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<tr>
<td>Essential</td>
<td>A good general knowledge in mechanical engineering sufficient to design &amp; develop teaching programmes and the provision of learning support across different levels of academic activity with a detailed knowledge of one [or more] of the following: Thermodynamics and Fluid Dynamics, Manufacturing and Fabrication, MEMS, Microfluidics, Composite Materials.</td>
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<td>Essential</td>
<td>Knowledge of a range of teaching techniques and methodologies to enthuse and engage students</td>
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### Skills, abilities and competencies

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<th>Essential</th>
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<tr>
<td>Essential</td>
<td>Highly developed communication skills to engage effectively with a wide ranging audience, both orally and in writing, using a range of media</td>
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<td>Essential</td>
<td>Ability to innovate in teaching and learning, e.g. through the development of teaching materials</td>
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<td>Essential</td>
<td>Ability to teach at any level within area of expertise, and across a range of subjects at a more introductory level, and demonstrate enthusiasm and commitment in the process of teaching</td>
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<td>Essential</td>
<td>Ability to present specialist material in a logical, coherent and interesting manner, both to students and to fellow specialists</td>
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<td>Essential</td>
<td>Ability to obtain new knowledge by theoretical and/or practical methods</td>
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<td>Essential</td>
<td>Ability to manage and deliver own teaching</td>
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<td>Essential</td>
<td>Ability to plan, manage, organise and assess own teaching contributions</td>
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<td>Essential</td>
<td>Ability to extend, transform, and apply knowledge from scholarship</td>
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<td>Essential</td>
<td>Ability to disseminate scholarly work, for example presenting papers at conferences and workshops, development of appropriate websites and publishing articles or papers in academic journals</td>
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<td>Essential</td>
<td>Excellent organisational and administrative skills</td>
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## PERSON SPECIFICATION

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<th>Experience</th>
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<td>Experience in teaching and learning in HE at undergraduate and/or postgraduate level or in an evidenced similar context</td>
<td>Essential</td>
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<td>Experience of using different delivery techniques to enthuse and engage students</td>
<td>Essential</td>
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<td>Evidence of successful planning and teaching design across a range of modules</td>
<td>Essential</td>
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<td>Evidence of lecturing, leading laboratory sessions, seminars, tutorials and other forms of undergraduate and postgraduate teaching</td>
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<td>Relevant industrial experience</td>
<td>Desirable</td>
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### Personal attributes

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<th>Essential / Desirable</th>
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<tr>
<td>Attention to detail and commitment to high quality</td>
<td>Essential</td>
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<td>Displays creativity, initiative and judgement in applying appropriate approaches to teaching, learning support and scholarly activities</td>
<td>Essential</td>
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<td>Collaborative ethos</td>
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<td>Positive attitude to colleagues and students</td>
<td>Essential</td>
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<td>Willingness to work proactively with colleagues in other work areas/institutions</td>
<td>Essential</td>
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<td>Ability to plan and prioritise own work in order to meet deadlines</td>
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<td>Commitment to personal development and updating of knowledge and skills</td>
<td>Essential</td>
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The Department of Electronic Engineering at York undertakes world-leading research with groups working in multidisciplinary areas including: electronic and computer engineering, specifically, bio-inspired adaptive architectures and systems; applied electromagnetics; immersive and interactive technologies, specifically, audio & music technologies; communications for challenging environments; nano-scale device fabrication and analysis; autonomous & robotic systems and electronics for healthcare: https://www.york.ac.uk/electronic-engineering/

Our key research areas fit into three overarching groups:

- Communication Technologies
- Intelligent Systems and Nanoscience
- Engineering Education and Management

In the 2014 REF 87% of our research outputs were judged world-leading or internationally excellent. Our research groups work with industry and universities across the world while providing a friendly and supportive environment for staff and students.

Our Department has a long-standing reputation for high-quality teaching and learning and highly employable graduates. Our MEng and BEng undergraduate programmes in a number of subject areas are fully accredited by the IET (Institution of Engineering and Technology) at CEng (Chartered Engineer) level: http://www.york.ac.uk/electronics/undergraduate/. The Department is consistently highly ranked for Electronic Engineering in the annual National Student Survey and was ranked 1st in the UK for graduate employment within one year of leaving the university (Longitudinal Education Outcomes (LEO) 2017).

Within Electronic Engineering our student body consists of approximately 400 undergraduate students and 120 taught postgraduate students. Our taught postgraduate students undertake one of our suite of MSc programmes, covering the latest technologies and skills in important industry sectors. We have a vibrant community of postgraduate research students enrolled on our PhD programme bringing our total student cohort to around 600 students.

The Department has 40 academic staff (including part-time and job share), research staff and a team of support staff, providing excellent administrative and technical assistance. It continues to hold the Bronze Award from Athena SWAN for promoting women in science, which was awarded in 2013. The Athena SWAN Charter recognises and celebrates good employment practice for women working in science,
THE DEPARTMENT

engineering and technology (SET) in higher education and research.

The Department is in a period of growth and is now looking to expand expertise in broader areas of engineering, including mechanical engineering, fluid mechanics, manufacturing & fabrication and materials. This expansion includes growth in both staff and students.

The Department of Electronic Engineering operates a family friendly policy and is committed to gender equality and diversity. The Department recognises that a flexible approach to working is vitally important in the recruitment and retention of staff who have family commitments. The Department offers flexible working hours to all staff and will actively support job sharing and career break requests where it is reasonable and practical to do so and where operational needs will not be adversely affected.

The Department provides support for all categories of staff in their applications for promotion, role reviews, awards and prizes and rewarding excellence nominations. It strives to address gender inequalities and ensure that there is a culture that supports equality and encourages better representation throughout the Department. Support for women at all stages of their career is recognised as being extremely important.

Further details regarding the Department can be found on its website: https://www.york.ac.uk/electronic-engineering/
THE UNIVERSITY

Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2019 it is the home of more than 18,000 students across more than 30 academic departments and research centres. Since opening over fifty years ago, we have become one of the world’s leading universities and a member of the prestigious Russell Group.

We are consistently recognised as one of the leading Higher Education Institutes and one of just six post-war universities to have appeared in the world top 100. We were rated 22nd in the 2019 Times & Sunday Times league table. The University of York has won six Times Higher Education (THE) Awards and five Queen’s Anniversary Prizes.

The University is proud of its association with Athena SWAN, holding multiple awards in support of gender equality, representation and success for all, with gold awards for Chemistry and Biology and a University-wide bronze award.

Of 154 universities that took part in the Research Excellence Framework (REF) in 2014, The University of York ranked 14th overall and 10th for the impact of our research. The University is consistently in the top ten UK research universities and attracts over £60m a year of funding from research alone.

Our vision is to make the University of York a world leader in the creation of knowledge through fundamental and applied research, the sharing of knowledge by teaching students from varied backgrounds and the application of knowledge for the health, prosperity and well-being of people and society.
Attractive workplace

Centred around the picturesque village of Heslington on the edge of the city of York, our colleges are set in an attractive landscaped campus. York enjoys a safe, friendly atmosphere with facilities including bars, shops, theatres and concert halls all within easy walking distance.

The University has undergone an unprecedented period of expansion and renewal since 2000. We have invested in twenty new buildings on the original campus and have completed the first and second phases of a £750m campus expansion. Our investment in new colleges, teaching and learning spaces, laboratories, research facilities and a new sports village mean there has never been a better time to join us.

During this period of change we’ve worked hard to retain our friendly, informal and collegiate atmosphere, which is important to our core values of inclusivity and interdisciplinarity.

We have a thriving international community and are committed to providing staff moving to York with as much support as possible through our Relocation Package and Welcome Officers.

The University is committed to promoting a diverse and inclusive community - a place where we can all be ourselves and succeed on merit. We offer a range of family friendly, inclusive employment policies, flexible working arrangements, staff engagement forums, campus facilities and services to support staff from different backgrounds.

For further information please visit our employee benefit pages.
THE CITY AND THE REGION

The City of York
Internationally acclaimed for its rich heritage and historic architecture, York’s bustling streets are filled with visitors from all over the world. Within its medieval walls you will find the iconic gothic Minster, Clifford’s Tower and the Shambles - just a few of the many attractions.

But York isn’t just a great place to visit - it’s also a great place to live and work. While nourishing a vibrant cosmopolitan atmosphere, York still maintains the friendly sense of community unique to a small city.

Visit www.visityork.org for more information on the city of York

Shopping, culture and entertainment
York boasts specialist and unique boutiques but also all the high street stores on its busy shopping streets. Alongside them you will find cinemas, theatres, an opera house, art galleries, a vast range of restaurants, live music venues and clubs. York is particularly renowned for its multitude of pubs and bars, from the modern to the medieval.

Housing and schools
Whether you choose to live close to the city, in one of the surrounding villages or further afield, you will find a wide range of housing within comfortable distance of York and the University. For families, the area has a range of excellent schools both in the state and independent sector.

Great location
York is one of Britain’s best-connected cities. Halfway between London and Edinburgh on the East Coast mainline, on intercity trains you can reach London King’s Cross in less than two hours and Edinburgh in two and a half hours. York is also well served by road links, and it is easily accessible from the A1, M1 and the M62.

For those travelling from overseas, Manchester Airport is two hours away and Heathrow Airport just three and a half. Flights from nearby Leeds Bradford Airport provide easy access to mainland Europe. By Eurostar from London St Pancras, Paris is just over six hours away.

Yorkshire
The Lonely Planet guide recently declared Yorkshire the third best region in the world to visit. There is something to cater to every taste, whether it be the rugged landscapes of the Moors or the Dales, the picturesque seaside towns of Scarborough and Robin Hoods Bay, the gothic architecture of Whitby or the vibrancy of cosmopolitan Leeds.
Apply online

- Go to https://jobs.york.ac.uk
- Find this job using reference 7587
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 30 May 2019

What will I need?

You will need to upload:

- your CV
- a letter describing how you meet the requirements of the job

You will also need details of 3 referees.

Help and assistance

Direct any informal queries to the Head of Department, Prof Andy Tyrrell (andy.tyrrell@york.ac.uk), or Dr Jude Brereton (jude.brereton@york.ac.uk)

If you have any questions about your application, contact the HR Services team:

recruitment@york.ac.uk

+44 (0)1904 324835