Lecturer / Senior Lecturer (Engineering Design) – 56681
School of Mechanical Engineering within the College of Engineering and Physical Sciences

Job Summary

To create and disseminate knowledge through initiating and conducting original research, through publication and through developing and delivering undergraduate, postgraduate and CPD programmes, as appropriate to the disciplinary area. In addition, to contributing to the department/school through management/leadership, and enterprise activities, as appropriate.

The successful candidate will be expected to teach at undergraduate and postgraduate level whilst committing to maintaining the University’s high standards in learning and teaching. They will engage in the development and delivery of courses in mechanical engineering design, including:

- Computer Aided Design
- Conceptual design
- Detailed design to BS8888
- Tribology
- Precision engineering
- Machine theory

The successful candidate will also be expected to supervise final year undergraduate and postgraduate Masters projects. The reward will be educating and inspiring some of the most promising future engineers in the UK.

The candidate will have a strong background in engineering including a PhD related to mechanical engineering (and ideally with some design). Industrial experience, either through working in or with industry would also be advantageous.

Current research activities broadly encompassing engineering design cut across the main research groups in the department. The successful candidate should therefore have research interests aligned with Biomedical Engineering, Manufacturing, or Vehicle Engineering.

We welcome flexible and part-time working, offer a generous maternity package (subject to qualifying periods of service) and have on-campus childcare facilities.
Main Responsibilities

Lecturer

Research
To plan and carry out research, using appropriate methodology and techniques. This may include, where appropriate to the discipline:

- Pursue personal research including developing research ideas and winning support, including financial support.
- Plan, publish and/or execute high quality research
- Project manage research activities, and/or supervise other research staff
- Present findings in high quality publications and conference proceedings
- Develop novel methodologies and techniques appropriate to the type of research being pursued
- Supervise and examine PhD students, both within the institution and externally
- Provide expert advice to staff and students within the discipline
- Apply knowledge in a way which develops new intellectual understanding
- Develop and make substantial contributions to knowledge transfer, and enterprise (including business engagement, public engagement) and similar activity that is of manifest benefit to the College and the University.

Learning and Teaching
To use a variety of methods in teaching and advising individuals and groups of undergraduates, postgraduates, or CPD students. Where appropriate to the discipline this may include:

- Teach and examine courses at a range of levels
- Plan and review own teaching approaches and act as a mentor to encourage others to do the same
- Develop programme proposals and make substantial contributions to the design of teaching programmes more widely in the Department or School, as appropriate
- Where appropriate, undertake and develop the full range of responsibilities in relation to supervision, marking and examining (including summative assessment, assessed work, contributing to the final award – as a mark or as credit – such as unseen examinations, essays, dissertations or presentations.
- Use appropriate approaches to learning and teaching in their field
- Disseminate appropriate practices through suitable media
- Develop and advise others on learning and teaching tasks and methods
- Develop and make substantial contributions to knowledge transfer, enterprise, business engagement, public engagement activities or similar on own specialism that enhances the student experience or employability and is of manifest benefit to the College and University
- Devise and supervise projects, student dissertations and practical work

Management/Administration
To contribute to Departmental/School administration or have a high level of responsibility for others. This may include:

- Contribute to the administration/management of research and/or teaching across the Department/School

We welcome flexible and part-time working, offer a generous maternity package (subject to qualifying periods of service) and have on-campus childcare facilities
• Lead and manage a team to devise and implement a new and/or revised process (e.g. new programme or a recruitment drive)
• Advise on personal development of colleagues and students
• Make a major contribution to some administrative activities within the University (e.g. appeals panels, working groups)
• Manage enterprise, business development, and public engagement activities of manifest benefit to the College and University
• Develop and make substantial contributions to knowledge transfer, enterprise, business engagement, public engagement, widening participation, schools outreach.

**Senior Lecturer**

**Research**

To pursue sustained research activity through original research and scholarship, including other research-related contributions through conference papers and presentations and/or consultancy projects and advice. Where appropriate for the discipline, this may include some but not all of the responsibilities listed below:

- Make a major contribution to the management of research activities
- Lead successful funding bids which develop and sustain research support for the specialist area (in disciplines where this is possible)
- Publish leading research that results in a sustained, highly respected reputation of international quality in the subject area and/or designing and developing innovative underpinning technologies
- Provide expert advice internally and externally
- Provide leadership of research that contributes to the progression of the discipline (in disciplines where this is possible)
- Referee and peer review articles for peer reviewed academic journals and grant applications by research councils and/or other major funding bodies
- Lead sustained high value impact activity in knowledge transfer and enterprise (including business engagement, public engagement) that is of manifest benefit to the College and University, and: a) makes a significant contribution to policy development at a national and international level; and/or b) involves development of industrial links and comparable networks and initiatives.

In addition, research responsibilities will include some but not necessarily all the indicative responsibilities from grade 8 listed below:

- Supervise and examine PhD students, both within the institution and externally
- Manage research activities and/or supervise other research staff
- Develop novel methodologies and techniques appropriate to the type of research being pursued

**Learning and Teaching**

To contribute at a senior level on a sustained basis in learning and teaching. Where appropriate for the discipline, this may include some but not all of the responsibilities listed below:

- Lead the development of new and appropriate approaches to learning and teaching. This may be underpinned by research and evaluation of teaching methods and systems.
- Act as adviser for teaching and learning methods through excellent practice and mentoring other colleagues

*We welcome flexible and part-time working, offer a generous maternity package (subject to qualifying periods of service) and have on-campus childcare facilities*
• Lead the design and/or co-ordination of programmes or equivalent activities across the School or Department
• Contribute to the development of teaching and learning policy, methods and standards, more widely than the School
• Contribute to debate nationally about policy, methods and practices through publications, conference activity and roles that advance quality in the discipline
• Lead the development and management of assessment strategies within the School/Department
• Lead substantial and sustained high value impact activity in knowledge transfer and enterprise (including business engagement, public engagement) that enhances the student experience and/or employability and is of manifest benefit to learning and teaching in the College and the University. This may include the development of industrial links and comparable networks and initiatives.

In addition, the learning and teaching responsibilities will include some but not necessarily all the indicative responsibilities from grade 8 level listed below:
• Teach and examine courses at a range of levels
• Plan and review own teaching approaches and act as a mentor to encourage others to do the same
• Develop programme proposals and make substantial contributions to the design of teaching programmes more widely in the Department or School, as appropriate
• Undertake and develop the full range of responsibilities in relation to supervision, marking and examining
• Use appropriate approaches to learning and teaching in their field
• Disseminate appropriate practices through suitable media
• Develop and advise others on learning and teaching tasks and methods

Management/administration

To chair and/or lead activities in the Department/School and representation on University committees or working groups. Where appropriate to the discipline, this is likely to include some but not all of the responsibilities listed below.
• Make an important contribution to the development and running of the Department or School, for example, leading activity on teaching assessment and/or on research
• Develop and manage staff and resources in support of major research and/or teaching activities
• Make important contributions to the development of the Department/School/PAU’s research strategy and/or learning and teaching strategy
• Contribute significantly to the development and delivery of knowledge transfer, enterprise, business engagement and public engagement activities with a sustained high value impact of manifest benefit to the College and the University

In addition, the management/administration responsibilities will include some but but not necessarily all the indicative responsibilities from grade 8 listed below:
• contribute to the administration/management of research and/or teaching across the Department/School
• Lead/project manage a team to devise and implement a new and/or revised process (e.g. new programme or a recruitment drive)
• Advise on personal development of staff and students

We welcome flexible and part-time working, offer a generous maternity package (subject to qualifying periods of service) and have on-campus childcare facilities
• Make a sustained contribution to widening participation, schools outreach and/or public understanding of the discipline
• Contribute to administrative activities within the University (e.g. appeals panels, working groups)
• Develop and manage staff and resources in support of major research and/or teaching activities

Skills and Experience

Lecturer
• A first degree in engineering
• PhD relevant to the research/teaching area or equivalent qualifications
• Extensive research/teaching experience and scholarship within subject specialism
• Proven ability to devise, advise on and manage learning/ research
• Skills in managing, motivating and mentoring others successfully at all levels

Research
• Experience and achievement reflected in a growing reputation
• Extensive experience and demonstrated success in planning, undertaking and project managing research to deliver high quality results
• Extensive experience of applying and/or developing and devising successful models, techniques and methods
• Experience and achievement in knowledge transfer, enterprise and similar activity

Teaching
• Ability to design, deliver, assess and revise teaching programmes
• Extensive experience and demonstrated success in developing appropriate approaches to learning and teaching, and advising colleagues
• Experience and success in knowledge transfer, enterprise and similar activity that enhances the student experience or employability

Management Administration
• Ability to contribute to School/Departmental management processes
• Ability to assess and organise resources effectively
• Understanding of and ability to contribute to broader management/administration processes

Senior Lecturer
• A first degree in engineering
• PhD relevant to the research/teaching area or equivalent qualifications
• Chartered Engineering status, or working towards this
• Extensive research/teaching experience and scholarship within subject specialism
• Demonstrate competence in Research; Learning and Teaching; and Management and Administration; and excellence in at least two of these areas.
We welcome flexible and part-time working, offer a generous maternity package (subject to qualifying periods of service) and have on-campus childcare facilities.

Research requirements
An excellent national reputation and a developing international profile through significant original research work and a clear record of impact. Evidence of success under the following headings, as appropriate to the discipline:

- High level peer esteem as evidenced by
  - Excellent reputation in the UK and often internationally, reflected in sustained high quality output, level of innovation, impact on subject and recognition
  - An excellent and sustained record of peer reviewed research publications
- Successful and sustained supervision of doctoral students to completion
- Substantial and sustained research income generation, e.g. through research grants, contracts, research consultancy or other external funding
- Sustained high value impact knowledge transfer and enterprise that is of manifest benefit to the College and University

Learning and teaching requirements
An excellent teaching profile and performance in terms of both impact and quality. The teaching quality demonstrated to be informed by an appropriate level of scholarship. Evidence of success under the following headings:

- High national reputation for the development of teaching and learning excellence within the discipline
- Successful and sustained use of a range of appropriate teaching methods, and assessment strategies that promote high quality learning, including learning that is flexible, distinctive and current and stimulates learners’ natural curiosity
- Significant and sustained contribution to one or more of the following: strategic development of new programmes; approaches to learning; the development of learning resources
- High quality and sustained contributions to fostering excellence in teaching activities more widely, i.e. in the Department/School or College and/or externally
- Track record of substantial and sustained high value impact on the enhancement of the student experience, and/or employability
- Mentoring and expert advice which develops the skills of colleagues in teaching and in fostering learning

Management and administration-related requirements
Demonstrated significant achievement in management and administration-related activities, which may include leadership of activities/initiatives. Evidence of success under the following headings

- Successful and sustained performance in significant administrative/managerial role (s) (e.g. exams officer)
- Significant and sustained high quality innovative contributions to the management/administration of the Department/School/College or University

Successful and sustained contribution to the corporate life of the School/College/University, displaying willingness to contribute actively to committees, collaborative teaching and administrative tasks