Job Related Information

This document includes information about the role for which you are applying and the information you will need to provide with your application.

1. Role Details

<table>
<thead>
<tr>
<th>Vacancy reference</th>
<th>15820</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job title:</td>
<td>Lecturer in Engineering</td>
</tr>
<tr>
<td>Reports to:</td>
<td>Head of School, Engineering &amp; Innovation</td>
</tr>
<tr>
<td>Salary:</td>
<td>£40,792 - £48,677 per annum</td>
</tr>
<tr>
<td>Terms and conditions:</td>
<td>Academic</td>
</tr>
<tr>
<td>Grade</td>
<td>AC3</td>
</tr>
<tr>
<td>Duration of post:</td>
<td>Permanent</td>
</tr>
<tr>
<td>Working hours:</td>
<td>Full time</td>
</tr>
<tr>
<td>Location:</td>
<td>Walton Hall, Milton Keynes</td>
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<tr>
<td>Closing date:</td>
<td>Thursday 18th April 2019 at 12 noon</td>
</tr>
<tr>
<td>Type of application form accepted:</td>
<td>Short application form, plus a CV and covering letter detailing how you meet the person specification.</td>
</tr>
<tr>
<td>Number of referees required:</td>
<td>3</td>
</tr>
<tr>
<td>Unit recruitment contact:</td>
<td><a href="mailto:Resourcing-hub@open.ac.uk">Resourcing-hub@open.ac.uk</a></td>
</tr>
</tbody>
</table>
2. Summary of duties

We are seeking to appoint an enthusiastic candidate to join an energetic and committed team delivering our distance-learning general engineering BEng/MEng degrees, and contribute to one or more of the specialist strands within these qualifications (e.g. mechanical engineering, materials engineering, electronics, engineering design, environmental engineering, energy). Teaching at The Open University is a team-based collaborative process, which enables unparalleled support for the training and induction of new staff into the teaching process.

It is expected that the successful candidates will be research active in a field of engineering that aligns with one of the existing research areas of the School of Engineering & Innovation or of the wider STEM Faculty.

The successful candidate will be based at the main Open University campus in Milton Keynes.

Main Duties
All academic staff are expected to undertake a combination of the following duties at a level appropriate for their career stage:

1. Teaching
   a. To contribute to the development, planning, implementation and updating of a high quality and successful curriculum at undergraduate and/or postgraduate levels.
   b. To prepare learning materials suitable for the teaching and learning methodologies used by the Open University.
   c. To contribute to the briefing, debriefing and training of part time teaching staff (Associate Lecturers).
   d. To contribute to the direction of teaching and assessment / examination by the University, monitoring of samples of marking by Associate Lecturers, and to act as a member of examination boards.
   e. To contribute to the assurance and enhancement of the quality of teaching, learning and research within the School of Engineering & Innovation and the wider STEM Faculty, and in line with University standards.
   f. To undertake professional development as an academic educator.

2. Research and Scholarship
   a. To undertake a self-directed programme of collaborative research and scholarship in a field that will contribute to the strengths of the School of Engineering & Innovation and the wider STEM Faculty, and at a level commensurate with the current standards of excellence in the Faculty.
   b. To generate grant income as appropriate.
   c. To undertake research that is internationally excellent and leads to high-impact publications.
   d. To attract and supervise postgraduate research students.
   e. To participate in and host School and Faculty seminars and workshops aimed at sharing research outcomes and fostering interdisciplinary collaboration.
   f. To undertake professional development as an academic researcher.

3. Outreach and Public Engagement
   a. To contribute to the outreach activities of the STEM Faculty.
   b. To participate in the national and international STEM community and learned societies.
   c. To enhance the reputation of the School, the Faculty and the University through participation in relevant external meetings and activities.

4. Enterprise and Impact
   a. To apply/bid for, deliver, and manage individual enterprise activities (e.g. academic supervision of knowledge transfer programmes, consultancy).
   b. To further Faculty interests by developing and maintaining a network of contacts and engagements with businesses and government bodies as appropriate.
   c. To initiate and sustain activities that enhance the impact of your research and scholarship.
5. Administration & Management
a. To engage with appropriate administrative tasks (e.g. workload planning, Career Development & Staff Appraisal).
b. To contribute effectively to relevant academic or management fora.
c. To undertake a programme of continuous professional development.

6. Other Responsibilities
a. To comply with the University’s Health and Safety and Equal Opportunities policies in the performance of duties.
b. To co-operate with the Open University in ensuring as far as necessary, that Statutory Requirements, Codes of Practice, University Policies, and School Health and Safety arrangements are complied with.
c. To have a strong commitment to the principles and practice of equality and diversity.

3. Person specification

Requirements

Education, qualifications and training

Essential: • A good honours degree (or equivalent) in Engineering or a closely related area

Desirable: • Post-graduate qualification in Engineering or a closely related area • Knowledge of aspects of one or more of: mechanical engineering, materials engineering, micro/nanoengineering, electronics/electrical engineering, engineering design, energy, environmental engineering, engineering education

Knowledge, work and other relevant experience

Essential: • Ability to develop new distance-learning material at all levels in the field of Engineering • Ability to contribute to teaching across a broad range of Engineering disciplines • Some experience of teaching support, training or supervision in a relevant subject area • A broad knowledge of developments within the Engineering area relevant to teaching or research/scholarship needs • Ability to carry out research in a field that aligns with one of the existing research areas of the School of Engineering & Innovation or of the wider STEM Faculty

Desirable: • Experience of producing online and/or distance learning materials • Ability to design laboratory-based resources for learning and developing skills for practical enquiry • Evidence of applying for external funding, taking into account stage of career • A good record of demonstrable research impact, commensurate with stage of career • Ability to develop new research collaborations within the University and with external organisations
• A good publication record in mid to top-ranking peer reviewed journals, commensurate with stage of career
• Experience of managing post-doctoral workers and research budgets
• Experience of working in/with industry
• Experience of working with and influencing policy makers, governmental and/or non-governmental institutions

Personal abilities and qualities

Essential:
• A demonstrable passion for teaching, whether in distance learning or face-to-face teaching environments
• Ability to work collaboratively with others in an interdisciplinary context for teaching or research
• Ability to develop a leadership role in teaching and/or research, commensurate with stage of career
• Enthusiasm for supporting distance learning by adults and for the application of new technologies to teaching and supporting students
• Ability to participate in a research programme compatible with the STEM Faculty research and scholarship strategy and the interests of other research groups in the School and Faculty
• Excellent communication skills, both oral and written in a variety of contexts, including the ability to offer and receive constructive criticism
• Ability to plan and organise work to agreed deadlines
• Commitment to the aims, ethos and values of the Open University

Desirable:
• The ability to write on issues outside of immediate area of expertise but in a related topic, in an informed and coherent manner

4. Role specific requirements e.g. Shift working

As well as ensuring the successful delivery of our distance-learning engineering modules, our teaching duties also include up to two weeks of face-to-face teaching annually at one of our engineering residential schools held during July and August.

On occasion, our teaching duties can involve participating in module briefings/de-briefings for our Associate Lecturer colleagues. These may take place at evenings or weekends.

5. About the Faculty/School

The Faculty of Science, Technology, Engineering and Mathematics (STEM) comprises:

• School of Computing & Communications
• School of Environment, Earth & Ecosystem Sciences
• School of Engineering & Innovation
• School of Life, Health & Chemical Sciences
• School of Mathematics & Statistics
• School of Physical Sciences
• Knowledge Media Institute
• Deanery including teams supporting Curriculum, Research and Enterprise, Laboratory Infrastructure and Faculty Administration

“We aspire to be world leaders in inclusive, innovative and high impact STEM teaching and research, equipping learners, employers and society with the capabilities to meet tomorrow’s challenges”

The Faculty of STEM consists of 700 staff and 1,800 Associate Lecturers. The Faculty delivers over 185 modules across undergraduate and postgraduate curriculum, supporting more than 20,000 students (full time equivalents) which is 29% of the OU total.

The Faculty generates more research income (circa £20M) than any other Faculty, supported by a comprehensive laboratory infrastructure.

We are proud of our distinctive values and capabilities underpinning our aspiration:

**We are inclusive:**
- We transform people’s lives, ensuring STEM education is openly accessible to many thousands of students from diverse backgrounds – our students express high satisfaction with their study experience
- We engage the public in exciting citizen science and engineering, including through free open educational resources, multi-platform broadcasting, outreach to inspire the next generation and with programmes to encourage more women into STEM

**We are highly innovative:**
- We are at the forefront of innovative developments in teaching practical science and engineering at a distance, through simulated and remote access laboratories and practical experimentation
- Our high quality teaching and curriculum are informed by world-leading research, strong links with professional bodies and communities of practitioners, as well as by scholarship focused on continuously improving our STEM pedagogy

**We deliver significant social and economic impact:**
- We provide STEM higher education at a scale and reach unsurpassed in the UK, with a sizeable international reach and further growth potential
- We inject transferable STEM skills and knowledge direct into the workplace for immediate employee and employer benefit, as students combine study while working
- The employability value of our courses is underpinned by accreditation from leading STEM Professional Bodies and Learned Societies, as well as partnerships and sponsorship with leading employers
- Our high quality, applied and academically relevant teaching and research addresses real-world issues, delivering impact for industry and society, including addressing pressing STEM skill-shortages across the UK

Further details can be found at [http://stem.open.ac.uk/](http://stem.open.ac.uk/)

**School of Engineering & Innovation**
The School of Engineering and Innovation is one of the largest Schools in the STEM Faculty, with circa 75 academic staff and around 30 full-time and 25 part-time PhD students. It is a broad-based multidisciplinary School that leads the OU’s teaching in the areas of Engineering, Technology and Innovation Management, Design, Systems Thinking and Environmental Management. We support qualifications including the IMechE, IET, IED and CIBSE accredited BEng/MEng, the IED accredited BA/BSc in Design and Innovation, the CIWEM accredited BSc in Environmental Management and Technology, the MSc in Engineering, the MSc in Technology Management, the MSc in Systems Thinking in Practice, and the CIWEM and IEMA accredited MSc in Environmental Management.
The School is one of the most research-intensive in the University, hosting two submissions in REF2014 from Materials Engineering and Design. Other areas of active research within the School that contributed to the University’s REF2014 submissions include Energy, Acoustics, Waste Management, and Systems Thinking.

Research areas within the School and across the STEM Faculty that are relevant to this post:

**Materials Engineering**
The Materials Engineering community at the OU is one of the leading materials research groups in the UK with a focus on engineering application. It comprises 11 academic staff, 6 technical support staff, 3 post-doctoral researchers, 17 PhD students, and an extended community of interest embracing energy and transport themes within the School, as well as micro/nanoscale materials research both within the School and across the STEM Faculty.

The Materials Engineering laboratories are well equipped for diffusion bonding and brazing, for electropulse processing, for residual stress measurement using various mechanics-based methods and X-ray diffraction, for mechanical testing, for creep testing (using digital image correlation (DIC) strain monitoring), and for metrology, microstructural examination and hardness characterisation. A dedicated workshop with a wire electro-discharge machining suite supports the research programmes and enterprise activities. Other research facilities include a novel atmospheric plasma printing facility for printing nanoparticles to 2D materials.

Further details can be found at: [http://www.open.ac.uk/postgraduate/research-degrees/research-areas/materials-engineering](http://www.open.ac.uk/postgraduate/research-degrees/research-areas/materials-engineering) and at [http://stem.open.ac.uk/research/groups/smart-materials](http://stem.open.ac.uk/research/groups/smart-materials)

**Energy**
The Energy research area has received significant investment in recent years. This has led to the newly formed OU Energy venture, bringing together the diverse range of energy-related research performed across the whole university. Further details of this initiative can be found at [http://energy.open.ac.uk](http://energy.open.ac.uk)

**Design**
The Design Group’s research strategy is formed around three main themes. In Sustainable Design, key themes are energy efficient products and services coupled with scoping and envisioning radical futures through theory, modelling and analysis of the routes to sustainable futures. The Complexity theme is thriving with exciting new work both on designing complex systems and the complexity of design processes. The Design Processes and Products theme draws together several threads in setting out a distinctive position for Design knowledge and theory across domains and sectors.

This work is complemented by research in Design Computation, including generative design, CAD, sketching, 3D scanning, rapid prototyping and digital imaging, with well equipped labs to support this work. Applications to industrial practice in the group, especially through groundbreaking work in engineering change processes and product redesign, has particular reference to energy efficiency, especially over product life cycle.

Further details can be found at [http://design.open.ac.uk/index.htm](http://design.open.ac.uk/index.htm)

**Integrated Waste Systems**
Integrated Waste Systems, or IWS, is a multidisciplinary research group which aims to deliver sustainable resource management solutions. A key feature of the research is working with stakeholders - with government bodies to provide evidence and policy-relevant understanding and with businesses to develop practical solutions to real world waste management problems. Our work focuses on reducing the impact of waste on the environment, health and climate change through technological, organisational and behavioural approaches.

Further details can be found at [http://www9.open.ac.uk/mct-ei/research/integrated-waste-systems](http://www9.open.ac.uk/mct-ei/research/integrated-waste-systems)

**Electronics/Electrical Engineering**
The recent introduction of an Electronics specialism within our BEng/MEng general engineering qualifications has led to the appointment of several new staff with expertise in Electronics and Electrical Engineering. These staff members are in the process of establishing a new research area, and setting up collaborations with colleagues across the STEM Faculty.
**Acoustics**

The Acoustics Research Group has been in existence for over thirty years, carrying out internationally leading research in the fields of environmental acoustics, musical acoustics and the development of acoustical measurement techniques.

Research group facilities include two anechoic chambers, a laser laboratory, an ultra high speed camera, a Laser Doppler Velocimeter, professional quality microphones, as well as a wide range of measuring apparatus and high performance computing equipment.

Further details can be found at [http://acoustics.open.ac.uk/](http://acoustics.open.ac.uk/)

**Engineering Education**

We have an enthusiastic and expanding group with expertise in Engineering Education. These staff members are in the process of establishing a new research scholarship area with collaborations across the Faculty.

Further details about the School of Engineering & Innovation can be found at [http://www9.open.ac.uk/mct-ei/](http://www9.open.ac.uk/mct-ei/)

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**6. How to obtain more information about the role or application process**

If you would like to discuss the particulars of this role before making an application please contact the Head of the School of Engineering & Innovation, Professor David Sharp, by phone +44(0)1908 653353 or by email to STEM-EI-HOS@open.ac.uk.

If you have any questions regarding the application process please email: Resourcing-hub@open.ac.uk

**7. The application process and where to send completed applications**

| Your application should contain: | 1. A completed short application form  
| | 2. A cover letter (maximum 1250 words) explaining how your experience and skills match the person specification  
| | 3. CV which includes details of academic qualifications, teaching, management, and research experience including grants received and publications.  |
| Please ensure that your application reaches the University by: | 12 noon on Thursday 18th April 2019  |
| E-mail your application to: | Resourcing-hub@open.ac.uk |

**8. Selection process and date of interview**

| The interview panel will be chaired by: | Prof Helen Sharp (Co Associate Dean Research, STEM Faculty) |
The other members of the interview panel will be:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. David Sharp</td>
<td>Head of School, Engineering &amp; Innovation</td>
</tr>
<tr>
<td>Mr Jan Kowal</td>
<td>Director of Teaching, Engineering &amp; Innovation</td>
</tr>
<tr>
<td>Dr Kathleen Quinn</td>
<td>Senior Lecturer, Mathematics and Statistics</td>
</tr>
<tr>
<td>Prof Carol Morris</td>
<td>Deputy Head of School, Engineering &amp; Innovation</td>
</tr>
<tr>
<td>Dr Dinar Kale</td>
<td>Senior Lecturer, Faculty of Arts &amp; Social Sciences</td>
</tr>
</tbody>
</table>

The interviews will take place on:  To be confirmed

The selection process for this post will include

1. A short, specified distance teaching activity to be completed before the interview date;
2. A 20 minute presentation of an aspect of your research or scholarship to academics from the School of Engineering & Innovation;
3. A formal interview

We will let you know as soon as possible after the closing date whether you have been shortlisted for interview. Further details on the selection process will also be sent to shortlisted candidates.

Applications received after the closing date will not be accepted.