

UNIVERSITY TEACHER in Digital Engineering

Job Ref: REQ250281

As part of the University's ongoing commitment to redeployment, please note that this vacancy may be withdrawn at any stage of the recruitment process if a suitable redeployee is identified.

Job Description

Job Grade: Specialist and Supporting Academic Grade 7

Job Purpose

The role holder will contribute to, develop and enhance the teaching of existing and future undergraduate and postgraduate programmes, within the discipline areas covered by the School of Aeronautical, Automotive, Chemical and Materials Engineering with a particular focus on digital engineering.

The role holder will play a key role in developing and delivering teaching and learning experiences in digital engineering, including but not limited to: augmented/virtual reality, digital twins, simulation and optimisation, AI in engineering applications, industry 4.0, engineering data analytics, programming, CAD etc. The role holder will be responsible for advancing digital pedagogy, designing and delivering impactful and inclusive learning experiences and driving innovation in the teaching of digital engineering in our programmes. The role holder will leverage the £5.8m investment at Loughborough University in [Digilabs](#), an exciting array of learning spaces and technology resources such as XR facilities including VR/AR headsets, GPU workstations, robotics, 3D immersive wall and 3D motion tracking, to develop and enhance education and student experience in engineering. The role holder will contribute to the sharing of best practice with staff and will contribute to vibrant and inclusive communities of practice within the institution.

The role will include developing and delivering teaching sessions in all forms, developing curriculum and assessments, marking and providing feedback.

JOB DUTIES:

Teaching

- To work with colleagues in the School to deliver an exceptional learning experience for students in relevant Engineering topics, particularly in digital engineering.
- To teach and inspire undergraduate and postgraduate campus-based and remote students, and to design and conduct associated assessments.
- To engage in pedagogy development and innovation, particularly in digital engineering, to ensure teaching practices remain at the forefront of technology advancements.
- To design, propose and develop appropriate facilities for education relating to digital engineering.
- To act as Module Leader and to engage in the evaluation and development of modules for which you have responsibility, in terms of content, delivery and assessment.
- To promote the use of a range of methods and techniques in teaching, learning and assessment.
- To prepare high quality course materials and ensure that it is available to students.
- To deliver teaching including individual and group tutorials, seminars and lectures. To supervise practical sessions and individual/group student project work.

- To manage projects relating to own area of work and the organisation of external activities such as visits, placements and field trips.
- To provide academic and pastoral support to undergraduate and postgraduate students.
- To be responsible for the design and content of specific areas of learning and teaching within the School's undergraduate and postgraduate programmes, particularly those relating to digital engineering.
- To cooperate with colleagues in the continuous review and development of the School's taught programmes and the curriculum.
- To work closely with the relevant programme leaders and take a leading role in the development of our undergraduate and postgraduate programmes.

Enterprise

- To engage with business, public and voluntary organisations through pedagogic knowledge exchange activities such as student projects and placements, collaboration, and short courses.
- To create social, cultural and economic impact from academic activity where possible.
- To pursue external funding in support of these activities.

Related Activities and Functions

- To work effectively with relevant administrative, technical and academic staff in the School and across the University.
- To carry out specific administrative roles and functions as may be reasonably required.
- To take part in, or to lead, staff discussion groups or a School committee.
- To embed EDI into the design and delivery of modules and programmes
- To engage in training programmes in the University (e.g. through Organisational Development and Centre for Enhanced Academic Practice) which are consistent with your needs and aspirations and those of the School.
- To engage fully with the university's professional review and development processes.
- To undertake such other duties as may be reasonably requested and that are commensurate with the nature and grade of the post. This may include marketing, representation of the subject at student recruitment events, industry collaboration and placement development.

Points To Note

The purpose of this job description is to indicate the general level of duties and responsibility of the post. The detailed duties may vary from time to time without changing the general character or level of responsibility entailed.

Special Conditions

All staff have a statutory responsibility to take reasonable care of themselves, others and the environment and to prevent harm by their acts or omissions. All staff are therefore required to adhere to the University's Health, Safety and Environmental Policy & Procedures.

All staff should hold a duty and commitment to observing the University's Equity, Diversity & Inclusion policy and procedures at all times. Duties must be carried out in accordance with relevant Equity, Diversity & Inclusion legislation and University policies/procedures.

Successful completion of probation will be dependent on attendance at the University's mandatory courses which include Belonging and Inclusion, Health & Safety, etc.

Organisational Responsibility

Reports to Dr Simon Martin, Associate Dean for Education and Student Experience in the School.

Person Specification

Your application will be reviewed against the essential and desirable criteria listed below. Applicants are strongly advised to explicitly state and evidence how they meet each of the essential (and desirable) criteria in their application. Stages of assessment are as follows:

- 1 – Application
- 2 – Test/Assessment Centre/Presentation
- 3 – Interview

Essential Criteria

Area	Criteria	Stage
Experience	<p>Experience of working in a high-quality industrial, professional or academic environment in engineering or closely related area.</p> <p>Extensive experience of working with a range of digital engineering tools that may include several of (but not limited to): augmented/virtual reality, digital twins, simulation and optimisation, AI in engineering applications, industry 4.0, engineering data analytics, programming, CAD etc.</p> <p>Experience of successfully supervising, delivering or leading projects using, developing or implementing digital engineering tools.</p>	1, 3
Skills and abilities	<p>Excellent technical skills in a variety of digital engineering tools including software and hardware.</p> <p>Demonstrable skills in the integration of digital engineering tools such as interfacing software (simulations) with hardware (e.g. headsets), or interfacing a digital asset (twin) with a physical system (cyber-physical systems).</p> <p>Excellent organisational skills and the ability to work independently and on own initiative.</p> <p>Excellent skills in the presentation/communication of relevant engineering subjects, particularly in digital engineering, adapting appropriately to different situations (e.g. audience, group size etc.).</p> <p>Flexible approach to working and an ability to prioritise tasks, with a capability of working under pressure to meet deadlines.</p> <p>Excellent team working and interpersonal skills.</p> <p>Ability to communicate effectively in oral and written form.</p> <p>Ability to provide tutorial and pastoral advice to students.</p>	1,2,3
Training	<p>Commitment to and evidence of continuing professional development.</p>	1,3

Qualifications	An outstanding educational profile to degree level in engineering or a relevant discipline. A relevant PhD or significant experience of working in a relevant high quality industrial, professional or academic environment.	1
Other	Commitment to observing the University's Equal Opportunities policy at all times.	1,3

Desirable Criteria

Area	Criteria	Stage
Experience	Experience of teaching and assessment at university level for both campus-based and remote students. Track record and experience of the design and development of engineering teaching in digital engineering in a higher education environment. Mentoring, training, or advisory experience either in industry or in academia. Experience of managing projects.	1,3
Skills and abilities	Ability to work with colleagues to share best practice and influence the uptake of teaching innovation and digital technologies. Ability to take part in module and programme development.	1, 2, 3
Qualifications	Achieved or willingness to progress towards appropriate professional status such as Fellowship of the Higher Education Academy.	1,3

Conditions of Service

The position is full time open ended. Salary will be on SSA Grade 7, in the range £46,735 to £55,755.

The appointment will be subject to the University's normal Terms and Conditions of Employment for Academic and Related staff, details of which can be found [here](#).

The University is committed to enabling staff to maintain a healthy work-home balance and has a number of family-friendly policies which are available at <http://www.lboro.ac.uk/services/hr/a-z/family-leave-policy-and-procedure---page.html>.

We also offer an on-campus nursery with subsidised places, subsidised places at local holiday clubs and a childcare voucher scheme (further details are available at: <http://www.lboro.ac.uk/services/hr/a-z/childcare-information---page.html>)

In addition, the University is supportive, wherever possible, of flexible working arrangements. We also strive to create a culture that supports equality and celebrates diversity throughout the campus. The University holds a Bronze Athena SWAN award which recognises the importance of support for women at all stages of their academic career. For further information on Athena SWAN see <http://www.lboro.ac.uk/services/hr/athena-swan/>