Academic Role Profile

Job Title:	Lecturer

Responsible to:	Head of Department or Faculty

Responsible for:	Research staff employed on programmes and awards directed by the post holder. May have supervisory responsibility for other staff.

Job Summary and Purpose
To develop a personal research portfolio in line with the Faculty's research strategy, to teach at undergraduate and postgraduate level, and to participate in Faculty administration.

Main Responsibilities/Activities

To support the research activities of the Faculty by:

Developing the research activities of the Faculty by sustaining a personal research plan independently and/or in collaboration with others as part of a larger research team.

Managing and undertaking research activities in accordance with a specific project plan, and supervising and guiding the work of staff and research students on own specialist area.

Developing innovative research proposals (as a self-contained item or as part of a broader programme), identifying sources of funding, submitting funding bids, and gaining positive reviews for these. Planning the research to be undertaken.

Publishing original research in appropriate journals or other media, as appropriate.

Attending appropriate conferences for the purpose of disseminating research results or for personal development.

Sustaining and developing professional expertise and maintaining the requirements for registration with the appropriate body (*for academics with clinical links only*).

To support the teaching objectives of the Faculty by:

Developing new teaching methods and designing programme units, and taking responsibility for the quality of programme units.

Planning, delivering and critically reviewing a range of teaching and assessment activities including lectures.

Training and supervising of students (including research students) and acting as a tutor for industrial/professional training year students, according to own area of subject specialism.

Setting/marking programme work, practical sessions, supervisions, fieldwork and examinations according to own area of subject specialism, and providing appropriate feedback to students.

UNIVERSITY OF SURREY

Academic Role Profile

Taking part in activities such as validating and examining in relation to the University's associated institutions.

To undertake pastoral care of students

Using listening, interpersonal and pastoral care skills to deal with sensitive issues concerning students and provide support. Appreciating the needs of individual students and their circumstances. Acting as personal tutor and giving first line support. Referring students as appropriate to services providing further help.

To engage in scholarship by:

Continually updating knowledge and understanding in the field or specialism. Extending, transforming and applying knowledge acquired from scholarship to teaching, research and appropriate external activities.

To contribute to the efficient management and administration of the Faculty by:

Performing such personal administrative duties throughout the Faculty as are recognised by the University as properly within the remit of the work of academic staff, as allocated by the Head of Faculty. Such duties may include Faculty co-ordinating roles, for example, running the process of admissions, examinations or teaching quality assessment.

Advising, supervising and giving guidance to other staff

Person Specification
The post holder must have:
An honours degree or an appropriate and equivalent professional qualification in a relevant subject
Normally a doctoral degree
Normally former experience of working as a lecturer
Evidence of administrative and organisational skills
Evidence of current research/scholarship at post-doctoral level or equivalent

UNIVERSITY OF SURREY

Academic Role Profile

Relationships and Contacts
The post holder will be a member of such Faculty Committees as may be relevant to their administrative duties, for example Faculty Board of Studies and Examination Board. New appointees will be assigned a senior colleague to guide their development and aid their integration into the Faculty and university. Research priorities will be agreed within the strategic framework of the research theme of which they are a member. Teaching and administrative duties will be allocated by the Head of Faculty, within the context of the teaching programmes agreed by the Faculty Learning and Teaching Committee or similar body.

Special Requirements
To be able to participate in residential field work, in the UK or overseas, according to own area of subject specialism. The post holder is expected to work outside normal office hours as necessary.

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.

- Help maintain a safe working environment by:

  - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand

  - Following local codes of safe working practices and the University of Surrey Health and Safety Policy

- Undertake such other duties within the scope of the post as may be requested by your Manager.

UNIVERSITY OF SURREY

Academic Role Profile

Addendum

This document provides additional information relating to both specific aspects of the post/Faculty and any post specific person specification criteria. The information contained within this document should always be read in conjunction with the accompanying generic Job Purpose.

Job Title:	Lecturer in Civil Engineering

Background Information/Relationships

Faculty: The University of Surrey is organised into three Faculties. The Faculty of Engineering and Physical Sciences (FEPS) comprises the Departments of Chemical and Process Engineering, Civil and Environmental Engineering, Computing, Electronic Engineering, Mathematics, Mechanical Engineering Sciences and Physics alongside the Centre for the Environment and Sustainability. The Faculty is built on the core engineering disciplines of aeronautical engineering, biomedical engineering, civil engineering, chemical engineering, electronic engineering and mechanical engineering, together with the core scientific disciplines of computing, materials, mathematics and physics. Within these fields we enjoy a reputation for excellence in research and teaching, allied to a strong enterprise culture and an unrivalled record of graduate employment. Our members of academic staff are well respected, both nationally and internationally, amongst the many areas of academia and industry with which we interact. We believe strongly in the principle that a university should contribute to the cultural wealth of society by developing the basic sciences whilst also developing the technology which will improve our overall quality of life.

Department: The Department of Civil and Environmental Engineering has around 23 FTE academic staff and 400+ students; studying on our BEng/MEng in Civil Engineering, specialist Masters programmes and PhD/EngD. The postholder will join one of the research groups in the Department of Civil and Environmental Engineering and undertake cutting edge research by securing income from research grants and contracts, resulting in world leading outputs:

- Clean Air
- Geomechanics
- Infrastructure Systems Engineering
- Water Environment and Health Engineering

S/he is expected to contribute to teaching at undergraduate level and at MSc level in their specialist area, in addition to making a contribution to the wider Civil and Environmental Engineering taught programmes. Currently, we offer BEng and MEng Degrees in Civil Engineering, together with a wide range of postgraduate MSc Degrees in:

- Bridge Engineering
- Civil Engineering
- Structural Engineering

- Water and Environmental Engineering
- Infrastructure Engineering and Management
- Advanced Geotechnical Engineering

Our teaching and research activities are supported by a range of well-equipped laboratories and computing facilities. Many of our undergraduate students benefit from Surrey's Professional Training Year. Over the last decade, our employment figures have been among the best in the UK. This was a key factor in Surrey being named **University of the Year for Graduate Employment** in *The Times/Sunday Times Good University Guide 2022*. In REF 2014, all the staff in the Department of Civil & Environmental Engineering were returned as part of the University's submission to General Engineering; 80% of our research output was rated as world-leading or internationally excellent.

The world will have to invest $90 trillion in sustainable infrastructure by 2030, according to the 2016 estimate by The New Climate Economy. This is being augmented in the post-pandemic world in order to accelerate green growth and fight climate change – "to build back better" is becoming a global imperative. With growing urbanisation, a holistic approach to **infrastructure** should address challenges in both traditional sectors such as energy, transport and waste, as well as indoor and outdoor air quality and natural infrastructure, such as green city landscapes and watershed protection. Civil and Environmental Engineering and Mechanical Engineering Sciences have collaborated intensively with infrastructure owners (e.g. Network Rail, Thames Water) and wind energy providers (e.g. RWE, Tokyo Electric Power Services) to develop decision-support tools for life extension and renewal strategies, including the development of digital twins that can be used to quantify impact assessment and avoid early replacement of assets, thus reducing their life-cycle carbon footprint. Work in Civil and Environmental Engineering has proposed improved and new processing routes required to convert available resources to useful products, transform/convert waste (plastic and water treatment) to energy, develop green solutions to improve air quality, recycle unused material and reprocess used material, within frameworks that encompass criteria on resilience and sustainability. We aim to adopt a holistic systems approach and develop new concepts of hierarchical modelling based on the integration of spatial-temporal data from wide-ranging sources and time points within a smart sensing framework.

Due to the particular emphasis on expanding and upgrading infrastructure in the next decade, we envisage growing opportunities not only in our traditional areas of strength but also in a range of cutting-edge approaches such as dynamic simulation, agent-based and data-driven modelling, and uncertainty quantification.

It is clear that our research aims to address key societal needs around the impact of human activities on the natural and built environment, with focus on air and water quality, and the delivery and management of sustainable and resilient infrastructure. It is aligned to the university thematic research priorities on **Sustainability** and **Urban Living.**

UNIVERSITY OF SURREY

Academic Role Profile

Over the past four years our research income has more than doubled and our PhD cohort has grown, with research awards from UK research councils (EPSRC, NERC, ESRC), the EU and UK industry. We co-ordinate Surrey's participation in the NERC SCENARIO doctoral training programme, run in collaboration with the University of Reading. We expect new members of staff to engage proactively with existing research strands but also to contribute to the Department's growing reputation by nurturing and developing new topics that are aligned to the University's strategic research themes.

All of our taught courses are fully accredited by the relevant Professional Institutions, the Engineering Council and European Accreditation of Engineering Programmes. It is expected that the postholder will be, or have the credentials to become, a Chartered Engineer.

Relationships: The appointee will report to the Head of Department. S/he will establish working relationships with staff (including other academics, researchers, technicians and support staff) and students in the Department in addition to staff in the wider Faculty and university, as appropriate. S/he will liaise with sponsors and external bodies informally and formally as needed.

Person Specification

This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Job Purpose.

	Essential/ Desirable
A higher research degree (PhD) in Engineering	E
A growing record of high quality publications	E
Understanding of the external research environment and evidence of external research grant income generation; or potential to achieve this.	E
A research vision to be pursued over the next five/ten years	E
Ability and willingness to contribute to University life beyond teaching and research	E
Evidence of high quality teaching; or potential to achieve this.	E
Excellent collaborative skills	E
Evidence of industry experience and/or engagement with industry.	D
Chartered Engineer status	D

Key Responsibilities

Academic Role Profile

This is not designed to be a list of all tasks undertaken but an outline record of any faculty/post specific responsibilities. This should be read in conjunction with those contained within the accompanying generic Job Purpose.
1. Undertake high quality research, as evidenced by a strong publication record and other metrics associated with successful outcomes, that complements one or more of the existing activities within the Department. 2. Apply for funding to support research activities and research students. 3. Deliver a high quality teaching and learning experience to students undertaking undergraduate and postgraduate activities, particularly, but not exclusively, with an emphasis on the structures/geotechnics areas of the curriculum. 4. Participate in a range of Departmental and University administration activities, as required. 5. Provide pastoral care to students, for example as a Personal Tutor, as appropriate **N.B. The above list is not exhaustive**.