

Job Description: Assistant Professor (Water Science)

Post title and post number	Assistant Professor (Water Science)
College/Budget Centre	
School/Department	GEES
Full time/Part time	FT
Duration of the Post	Open-ended
Salary	
Additional information	
Terms and Conditions	Academic Teaching Staff
Closing Date	
Grade	8

Background

We are seeking to appoint an Assistant Professor in Water Science in the School of Geography, Earth & Environmental Sciences (GEES) at the University of Birmingham. Their expertise should address how freshwater and catchment systems respond to climate change, extreme events, human pressures, and/or environmental transitions. The post will strengthen our portfolio of water-related research across the School - ranging from catchment hydrology, river processes and water quality, to aquatic ecosystems, hazards, and water-society interactions.

The role is advertised as a three-legged contract with excellence in research, education and administration all expected, with candidates able to demonstrate a commitment to teaching and school service. We welcome applications from candidates undertaking innovative and impactful research across the physical, environmental, and interdisciplinary dimensions of water science, including but not limited to:

- Hydrological processes, extremes, and human–water interactions
- Freshwater biogeochemistry, water quality, emerging pollutants, and ecosystem responses
- Ecohydrology, land–water connectivity, water-cryosphere, and climate– aquatic ecosystem feedbacks
- Hydroinformatics (including novel AI), data assimilation, uncertainty analysis, and reflective approaches to model design and evaluation
- Hydrological processes linking water, disease, and health
- Earth observation and spatial analysis for monitoring, mapping, and diagnosing change to hydrological processes across scales.

Evidence of a developing track record in publishing work of high academic quality and impact is essential, as is an emerging portfolio (or clear potential) of external research funding. Applicants must have a commitment to delivering excellent, inclusive teaching and learning at undergraduate and postgraduate levels. Teaching may include a range of contributions, notably within our physical geography and environmental science programmes. Applicants are also expected to have a commitment to postgraduate research supervision. Successful candidates will participate in School activities and take on administrative responsibilities appropriate to their appointment.

There are significant opportunities for interdisciplinary collaboration across campus, particularly via the Birmingham Institute for Forest Research (BIFoR), the Environmental Change Outdoor Laboratory (ECOLAB), the Birmingham Institute for Sustainability and Climate Action (BISCA) and the Institute for Data and AI (IDAI), as well as through global partnerships in Brazil, China, India, North America.

Academic Development Programme - new Assistant Professors will undertake a 5-year development programme, at the end of which they are expected to be promoted to Associate Professor. The programme consists of a variety of development opportunities and the time to reflect and develop.

Summary of Role

You will contribute to a range of research, teaching and administration activities. In addition, you will be expected to demonstrate academic citizenship, developing and maintaining generous, mutually respectful and supportive working relationships with all staff and students, and ensuring the way you carry out your role impacts positively on how others can carry out theirs.

Research will involve initiating, conducting and disseminating original scholarship. Your research will have measurable outcomes reflecting your growing national (and emergent international) reputation. Teaching will include (a) contributing to the undergraduate and Master's teaching programmes (for example BSc Physical Geography, BSc Environmental Science and MSc River Environments and their Management) and (b) enhancement of the student experience or employability that is of manifest benefit to the School and University.

Management and administration are likely to involve contributions at School level, and/or making an important contribution to some managerial/leadership activities (e.g. working groups) within the University. This may include developing and making substantial contributions to knowledge transfer, enterprise, business engagement, public engagement, widening participation, schools outreach, or similar activities at School level or further within the University.

Main Duties / Responsibilities

Education

Using a variety of methods in teaching and advising individuals and groups of undergraduates, postgraduates, or CPD students, including (as appropriate):

- teaching and examining courses at a range of levels;
- planning and reviewing your own teaching approaches and encouraging others to do the same;
- designing contemporary, inclusive, engaging and academically challenging curriculum content;
- working collaboratively with colleagues to design and deliver teaching, learning and assessment;
- using digital resources/environments effectively to support learning and assessment;
- developing programme proposals and making substantial contributions to the design of teaching programmes more widely;
- where appropriate, undertaking and developing the full range of responsibilities in relation to supervision, marking and examining;
- developing and advising others on learning and teaching tasks and methods;
- developing and making substantial contributions to knowledge transfer, enterprise, business engagement, public engagement activities or similar on own specialism that enhances the student experience or employability and which benefits the College and University;
- devising and supervising projects, student dissertations and practical work.

Research

Planning and carrying out research, including (as appropriate):

- planning and publishing high quality research, including winning financial support;
- project managing research activities, and/or supervising other research staff;
- presenting findings in publications and conference proceedings;

- effectively supervising and mentoring PhD students or early Career Researchers;
- providing expert advice to staff and students within the discipline;
- participating in research-related enabling activities such as adding value to a cross disciplinary network;
- applying knowledge in a way which develops new intellectual understanding; developing and making substantial contributions to knowledge transfer, and enterprise (including business engagement, public engagement) and similar activity that is of benefit to the College and the University, including ensuring that the impact of your activities is realised fully and the impact is documented.

Management/Administration

Contributing to Departmental/School administration, including:

- contributing to the administration/management of research and/or teaching across the Department/School;
- leading and managing a team to devise and implement a new and/or revised process (e.g. new programme or a recruitment drive);
- advising on personal development of colleagues and students;
- making a major contribution to some administrative activities within the University (e.g. appeals panels, working groups);
- managing enterprise, business development, and public engagement activities;
- developing and making substantial contributions to knowledge transfer, enterprise, business engagement, public engagement, widening participation, schools outreach.
- actively manages equality, diversity and inclusion through monitoring and evaluation and actively challenging unacceptable behaviour.

Citizenship

Contributing to an inclusive working environment:

- demonstrating a willingness to be involved in a variety of activities supporting University life (e.g., participation in graduation, Departmental/School committees);
- demonstrating support for colleagues, such as sharing resources, providing advice;
- willingness to volunteer for one-off duties (such as supporting School, Institute, and Departmental projects);
- positively engaging in School strategic initiatives;
- proactive support and involvement in activities specifically contributing to a positive and inclusive community spirit across the School/College/University.

Person Specification

- Normally, a higher degree relevant to the research/teaching area (usually PhD) 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

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

Research

- Experience and achievement reflected in a growing reputation as a researcher with the subject specialism water sciences.
- 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

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
- Experience of championing Equality, Diversity and Inclusion in own work area
- Ability to monitor and evaluate the extent to which equality and diversity legislation, policies, procedures are applied
- Ability to identify issues with the potential to impact on protected groups and take appropriate action