

# Research Assistant

## Department of Biochemistry

Closing Date: Tuesday 8th July 2025

Job Reference: PH46415



# Research Assistant

**Salary:**

£32,546-£35,116

**Contract:**

Fixed-Term. The funds are available for 1 year from start date.

**Location:**

Central Cambridge

**Faculty / Department:**

Biochemistry

**Responsible to:**

Dr Susanne Bornelöv

**Working pattern:**

Full-time, 37 hours per week.

The University of Cambridge has a Hybrid Working Policy that aims to enable as many staff as possible to work in a hybrid way if they so wish, whilst recognising that some roles will include tasks that can only be performed on University premises.

**Purpose of the role:**

This is an exciting opportunity to use AI-based methods to uncover the molecular mechanisms behind gene regulation and mRNA fate. You will be part of a computational team, led by Dr Susanne Bornelöv, which studies the role of codon usage bias in gene regulation using various approaches including machine learning and AI, evolutionary genomics, and sequencing bioinformatics.

You will contribute to a project using deep learning or other machine learning approaches to reveal how codon usage bias and other mRNA features contribute to gene regulation. The ultimate aim is to gain a precise understanding of how these different properties interact to influence mRNA localisation, stability and translation, as well as protein function.

**Key responsibilities:**

- Undertake basic research. For example, preparing, setting up, conducting, and recording the outcome of computational experiments.
- Develop and apply deep learning and other machine learning or statistical approaches to investigate the contribution of nucleotide sequence to gene regulation.
- Analyse and interpret results of own research and generate original ideas based on outcomes.
- Continue to update knowledge and develop skills.





# Research Assistant

## Key responsibilities (cont.):

- Contribute to the production of research reports and publications.
- Plan own day-to-day research activity in the framework of the agreed programme.
- Be able to work to deadlines in order to achieve a research objective.
- Coordinate own work with that of others.
- Contribute to the smooth running of the team and communicate openly about results and challenges.



# Person specification

	Essential	Desirable
<b>Education and Qualifications:</b>		
BSc degree in Biology, Computer Science, Biochemistry, Natural Sciences, or related subject.	✓	
MSc degree in Systems Biology, Bioinformatics, Computer Science, Artificial Intelligence, Genomics, or related subject.		✓
<b>Skills and Experience:</b>		
Ability to plan, execute and record scientific studies.	✓	
Solid programming/scripting skills.	✓	
Experience using high-performance computing and/or using version control systems.		✓
Experience using machine learning techniques.	✓	
Experience using deep learning frameworks such as TensorFlow or PyTorch.		✓
Experience studying any aspect of gene regulation or mRNA turnover, or of working with high-throughput sequencing data.		✓
<b>Interpersonal and Communications Skills:</b>		
Excellent communication and interpersonal skills and attention to detail, ability to work effectively as part of a team.	✓	
Ability to present scientific data and to interact with scientific colleagues.	✓	
Ability to manage own workload and meet deadlines.	✓	
<b>Achievements:</b>		
Track record of contributions to scientific area, demonstrated by peer-review publications, preprints and/or through conference presentations.		✓

## Declaration on Research Assessment

The University of Cambridge is a signatory to the San-Francisco Declaration on Research Assessment (DORA), and in recruitment or promotion evaluations will assess research on the basis of its merits rather than the journal or venue in which it is published. Applicants should not include Journal Impact Factors or uncontextualized metrics in their applications. Full details are at: <https://www.research-strategy.admin.cam.ac.uk/research-policy/DORA>

# Behavioural Attributes

This section summarises the behavioural attributes (or competencies) that we expect the role holder to be able to demonstrate, at what level and whether this is an essential or desirable requirement. Full definitions are at: <https://www.hr.admin.cam.ac.uk/policies-procedures/behavioural-attributes>.

Please review these and provide specific examples in your application of how you have demonstrated these attributes in your work, education or other experience. It will assist your application if you explain the situation, what you did and what the outcomes were.

Attribute	Level
Valuing Diversity	A
Achieving Results	C
Communication	C
Innovation and Change	C
Negotiating and Influencing	D
People Development	C
Relationship Building	C
Strategic Focus	D

# Professional Services Values

Developed by professional services staff, our values underpin everything we do. By living the values in the work we do, we hope to foster an environment where staff feel empowered. The values encourage staff to; work together and share skills to create a sense of community, act with integrity, take an inclusive and fair approach and develop honest and open relationships that are underpinned by our shared values. We encourage applicants to consider these values within their application.



# The department

## About the department

The Department of Biochemistry of the University of Cambridge is a world-leading biochemical research and education facility, building on the University's tradition of scientific enquiry to enable and support outstanding science. As part of the School of the Biological Sciences our excellent undergraduate and postgraduate education programmes develop the next generation of scientists, whilst over 50 research groups led by investigators of international standing collaborate with colleagues around the world to answer fundamental questions on how cells and their constituent molecules work in life and relate to disease. Department of Biochemistry at the University

The Department is located in two main buildings located on Tennis Court Road. The original Hopkins Building on the Downing Site started life in 1924 as the Sir William Dunn Institute of Biochemistry, under the inspirational leadership of our founder, Frederick G. Hopkins. The Hopkins Building is beautiful, elegant and, equally important for a modern teaching and research department, has been extensively refurbished in recent years. Our other main building, located on the Old Addenbrooke's Hospital Site, is named after the late, great Fred Sanger, an alumnus of the Department and winner of two Nobel Prizes in Chemistry – one for the sequencing of proteins and the second for developing the technology to sequence DNA that precipitated the genomics revolution. The Sanger Building was funded by generous donations from Peter and Paula Beckwith, the Wolfson Foundation, the Wellcome Trust and many others and was opened formally by Fred Sanger himself in November 1997.



## Research

The focus of our scientific investigation can broadly be broken down into nine research themes: Chemical Biology & Drug Design, Disease Biology, DNA & Chromatin Biology, Molecular Microbiology, Plant Biochemistry & Bioenergy, RNA Biology, Signalling & Trafficking, Stem Cell Biology, and Systems Biology. These themes are not mutually exclusive, however, with many of our Research Group Leaders conducting research spanning multiple areas. support our world-leading biochemical research and education programmes, the Department of Biochemistry houses state-of-the-art core facilities, including cryo-electron microscopy, NMR spectroscopy, crystallography, biophysics, mass spectrometry, protein chemistry, metabolomics, and advanced services for protein and nucleic acid sequencing.

## Teaching

The teaching programmes of the Biochemistry Department embody a fundamental approach to the chemistry of life and convey the strongly unifying contribution of biochemistry and molecular biology to other scientific disciplines. We teach students in four undergraduate years, in both the Natural Sciences Tripos (NST) and the Medical Sciences Tripos and Veterinary Sciences Tripos. Courses in the Faculty of Biology increasingly flow across departmental boundaries, where there is scientific common ground, in terms of personnel and planning. The Department also delivers Part III Biochemistry course which caters for students who expect to continue with postgraduate research, and leads to a Master of Natural Science Degree (MSci) as well as the usual BA to which all Cambridge undergraduate science courses lead. The Department also has major contribution to the Part III in Systems Biology. The Department contributes to a highly competitive postgraduate programme that support 160 postgraduate students in all fields of Biochemistry.

For more information about the Department <https://www.bioc.cam.ac.uk>



# The school

The School of the Biological Sciences encompasses the Faculty Board of Biology and the Faculty Board of Veterinary Medicine and is represented on the Faculty Board of Clinical Medicine. It has responsibilities across four Triposes (the Natural Sciences Tripos, the Medical Sciences Tripos, the Veterinary Sciences Tripos and the Psychological and Behavioral Sciences Tripos).

## About the School

It shares the Graduate School of Life Sciences, Graduate Committee and Medical Education Committee with the Clinical School. It has its own Degree Committee. It includes nine Departments and the Centre for Family Studies, plus five major research Institutes and an animal hospital. The School is a key player in the Cambridge Conservation Initiative as well as the majority of Cambridge Strategic Initiatives. The School is associated with the Museum of Zoology and the Botanic Garden. Key officers of the School plus details of relevant Research Ethics Committees (Human Biology, Psychology) can be found on the School's website. Various subcommittees report to the Council, as required.

Formal representation on the Council of the School (its most senior decision-making body) is outlined in Chapter 8 of the University's Statutes and Ordinances. Heads of School Institutes, as well as Heads of Departments, are currently co-opted on to the Council, together with representatives of the three Faculty Boards. In addition, the Head of the Botanic Garden and a representative from the School of Technology attend as observers.

Most of the detailed information about research and teaching in the School is to be found on the departments' web sites. The members of the Gurdon Institute, the Sainsbury Laboratory and the Systems Biology Centre have affiliations with departments in the School. The Stem Cell Institute and Milner Institute also have affiliations within the School of Clinical Medicine.

## Athena SWAN

The Athena SWAN Charter was launched in June 2005 to recognise and reward commitment to advancing careers of women working in higher education in science, technology engineering, mathematics and medicine (STEMM). The University of Cambridge was a founder member of Athena SWAN Charter and the University won its first award in the inaugural round of March 2006. Since then, the University has successfully renewed its Bronze Athena SWAN awarded in 2009 and 2012 and in 2014 achieved a Silver Athena SWAN award. Many of the Departments in the School of Biological Sciences hold awards at Bronze or Silver level and the School continues to support the Athena SWAN process across all subjects.



# Terms of appointment

## Tenure and probation

Appointments will be made on a fixed-term basis for a period of 1 year, due to limited funding.

<https://www.hr.admin.cam.ac.uk/policies-procedures/guidance-use-fixed-term-and-open-ended-contracts/recruitment-and-objective>. Appointments will be subject to satisfactory completion of a six month probationary period.

## Hours of Work and Working Pattern

The hours of work for the position are full-time (37 hours per week), working Monday – Friday.

## Pension

You will automatically be enrolled to become a member of USS (Universities Superannuation Scheme) – a defined benefits pension scheme. For further information please visit:

[www.pensions.admin.cam.ac.uk](http://www.pensions.admin.cam.ac.uk)

## Annual leave

Full time employees are entitled to annual paid leave of 41 days inclusive of public holidays. For new part-time employees, annual leave will be pro rata'd based on days worked.

## General information

### Pre-employment checks

### Right to work in the UK

We have a legal responsibility to ensure that you have the right to

work in the UK before you can start working for us. If you do not have the right to work in the UK already, any offer of employment we make to you will be conditional upon you gaining it.

### Health declaration

Once an offer of employment has been made the successful candidate will be required to complete a work health declaration form.

### Qualifications

The person specification for this position lists qualifications that are essential and/or desirable. Please note that if you are offered the post you will be asked to provide your relevant original certificates of these qualifications.

### References

Offers of appointment will be subject to the receipt of satisfactory references.

### Information if you have a disability

The University welcomes applications from individuals with disabilities.

We are committed to ensuring fair treatment throughout the recruitment process. We will make adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so and, if successful, to assist them during their employment. Information for disabled

applicants is available at <http://www.admin.cam.ac.uk/offices/hr/staff/disabled/>

We encourage you to declare any disability that you may have, and any reasonable adjustments that you may require, in the section provided for this purpose in the application form. This will enable us to accommodate your needs throughout the process as required. However, applicants and employees may declare a disability at any time.

If you prefer to discuss any special arrangements connected with a disability, please contact, the Department Administrator, who is responsible for recruitment to this position.



# The University

**The University of Cambridge is consistently ranked one of the best universities in the world, achieving academic excellence through its Faculties, Departments and other Institutions, together with the 31 Colleges.**

The University is renowned for its record of discovery and innovation. It is one of the great institutions, with a regional, national and global reach, attracting the very best and brightest minds. Our staff and students shape the world around us for the better: we attract and partner with like-minded people.

Whether contributing to the development of new anti-cancer drugs, adding to the understanding of how black holes are formed, revolutionising the study of ancient settlements, convening academic expertise to offer solutions to the climate crisis, or analysing public attitudes towards democracy around the world, the University's research is remarkable in its breadth, quality and impact. The University also sits at the heart of Europe's largest technology cluster and has catalysed more than 1,500 high-tech companies. And yet what inspires our 24,000 students and 13,000 staff is not what has already been achieved, but what is possible in the future.

The education and experience of our students, based on a partnership between the University's academic Departments and Faculties and the 31 Colleges, is second to none. Every student is a member of one of the Colleges, each a community of students, academics and staff drawn from across the University's comprehensive range of subject areas.

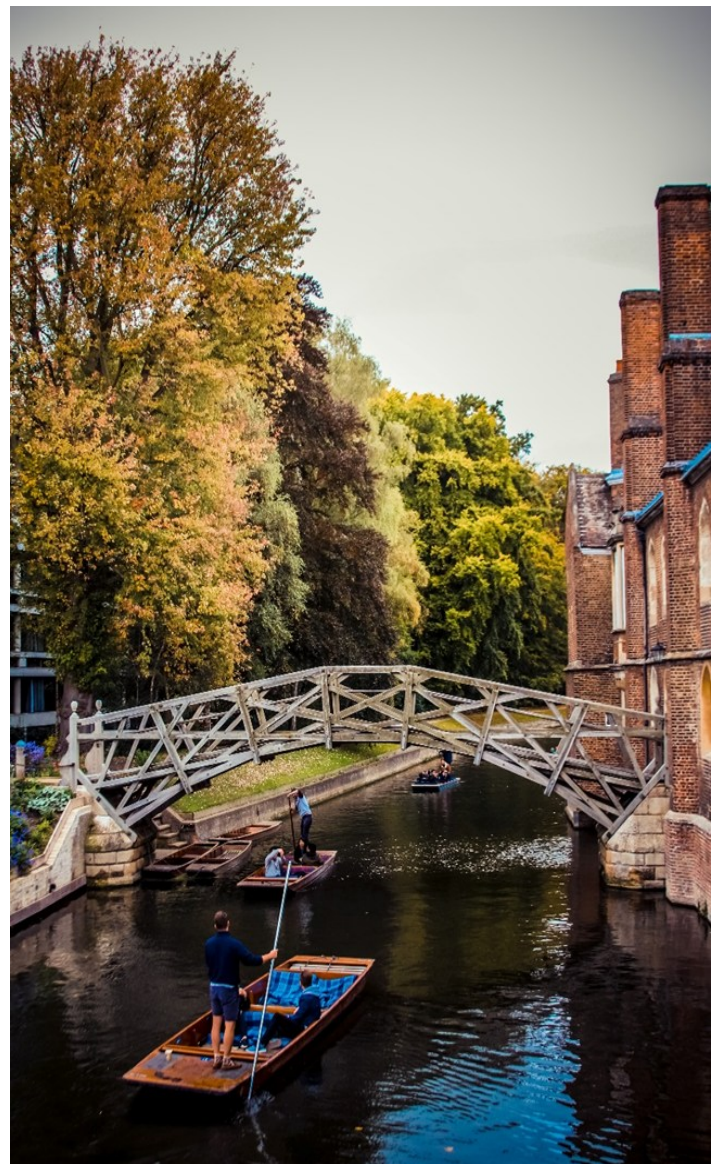


The University is a self-governing community, with a system for decision-making that provides a high degree of accountability and transparency to its members. Each Department and Faculty is part of one of six academic Schools, but each of them, and each individual academic, has a great deal of autonomy. The Colleges are independent and self-governing, working in a symbiotic relationship with the University.

The University has a number of Institutions that are independent of any Faculty or Department and are not part of the academic Schools. These include the Institute of Continuing Education (which provides high-quality education to adults throughout their lives), the Fitzwilliam Museum, Kettle's Yard (an historic house and gallery that holds important collections of modern art) and the University Library. In addition to their diverse contributions to University and public life, these non-School Institutions are also important centres of teaching and research.

Cambridge University Press & Assessment provides academic publishing, examinations and learning materials worldwide, supporting the dissemination of research, academic development at school and in higher education, and international student mobility. Legally, the Press & Assessment is a department of the University. It provides very important funds to invest in the academic purposes of the University.

The University has made truly remarkable contributions to the sum of human understanding, with breakthrough ideas and discoveries that have changed the way we understand ourselves, our planet, and the universe around us. Yet the global and national contexts in which it operates are fast-changing and increasingly filled with uncertainty. In a world that is becoming - politically, economically, socially, and technologically – ever more interconnected but even less equal, the University's mission – “to contribute to society through the pursuit of education, learning and





# About Us

**The University is one of the world's leading academic centres. It comprises 150 faculties and departments, together with a central administration and other institutions. Our institutions, museums and collections are a world-class resource for researchers, students and members of the public representing one of the country's highest concentrations of internationally important collections.**

The University has an annual income of £2 billion. Research income, won competitively from the UK Research Councils, the European Union (EU), major charities and industry, exceeds £500 million per annum and continues to grow.

The Colleges and the University remain committed to admitting the best students regardless of their background and to investing considerable resources both in widening access and financial support. The 31 Colleges are self-governing, separate legal entities which appoint their own staff. Many academic staff are invited to join a College as a Teaching Fellow, which provides a further social and intellectual dimension. The Colleges admit undergraduate students, provide student accommodation and pastoral support and deliver small group teaching for undergraduates.

The University awards degrees and its faculties and departments provide lectures and seminars for students and determine the syllabi for teaching.

Our instinct for seeking out excellence and setting up enduring and mutually beneficial collaborations has led us to establish strategic partnerships across the globe. Whether it is the successful Cambridge-Africa Programme involving universities in Ghana, Uganda and elsewhere on the African continent; or the close association with the government of India to pursue new research in crop science; or the creation, with Germany's Max Planck Institutes, of a Cambridge-based centre for the study of ethics, human economy and social change – international partnerships are now an inextricable part of the University's make-up.

"Through its outstanding education, research and innovation, the University of Cambridge has made - and continues to make - a lasting contribution to human knowledge and is flourishing. By working at the University of Cambridge, you will be joining a vibrant community of students, scholars and professional services staff, committed to supporting and enhancing the University's mission to contribute to society."

Professor Deborah Prentice,  
Vice Chancellor, 2023





# Working at the University

**Working at Cambridge you will join a diverse, talented and innovative community, with more than 24,000 students and over 13,000 staff from all walks of life and corners of the world.**

The University continually explores strategies to attract and retain the best people. It is committed to supporting its staff to achieve their best. We are a fair, diverse and inclusive society and we believe our staff are our greatest asset. There is strong commitment to developing institutional leadership and supporting and encouraging staff development at all levels.

We offer a variety of roles including academic, research, professional, managerial and support roles. We also offer extensive benefits and excellent learning opportunities within a stimulating working environment.

## **Equality & diversity**

The University has built its excellence on the diversity of its staff and student community. We aim to be a leader in fostering equality and inclusion, and in promoting respect and a sense of belonging for all. We encourage applications from all sections of society. All appointments are made on the basis of merit. We have an Equal Opportunities Policy, along with a range of diversity groups, including the Women's Staff Network, Race Equality Network and LGBT+ Staff Network. More details are available here: <http://www.equality.admin.cam.ac.uk/>

The University's estate is undergoing the most significant transformation in its history.

Cambridge has been able to create a new science and technology campus to the west of the city centre, and is now expanding further to the north west of Cambridge including investing in affordable homes for University key workers and community facilities. Even with our continued development, the University remains within walking or cycling distance across the campus. The University is a major partner on the Cambridge Biomedical Campus and we continue to redevelop our historic city centre sites demonstrating our determination to ensure that we can offer the best facilities and opportunities for our staff and students.



The University has a bronze Race Equality Charter award, with a framework for improving the representation, progression and success of minority ethnic staff and students within higher education. Furthermore, the University's silver Athena swan award recognises and celebrates good practice in recruiting, retaining and promoting gender equality.

# Living in Cambridge

**Cambridge is rich in cultural diversity. From beautiful University and College buildings, museums and art galleries, quaint gardens and punts on the River Cam, to a vibrant restaurant and café scene, our employees are surrounded by the wonderful features of this unique city.**

You can find a wide-range of high street shops and 3 shopping centres, with independent alternatives at the historic market and nestled within the passageways in the city centre. You will find a cinema, bowling alley, a nightclub and various live performances at the Cambridge Leisure Park, with further entertainment options at the Corn Exchange, Arts Theatre and the ADC Theatre. Further information can be found on the Visit Cambridge website.

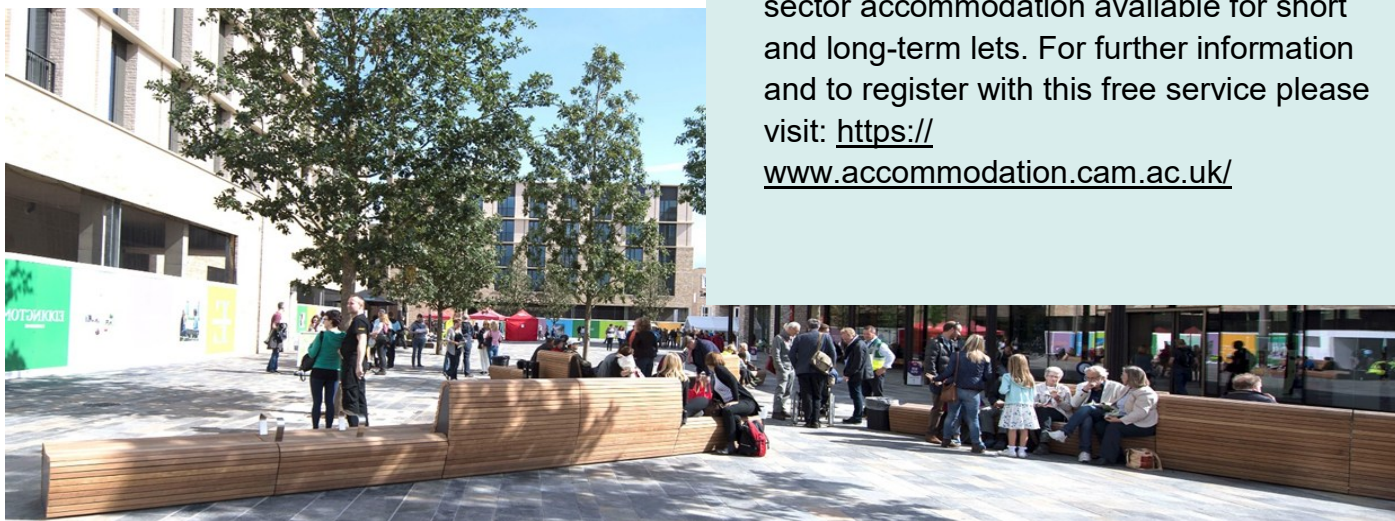
If you prefer the faster pace of life, London is a 45-minute train journey away. For those travelling from overseas, Stansted Airport is just 45 minutes away and Heathrow Airport under 2 hours away. The University is a short distance from a host of other attractions such as Ely Cathedral, Newmarket Races and various wildlife parks and stately homes. Cambridge is also within easy reach of the beautiful Broads and coastlines of Norfolk and Suffolk.

## Relocation Support

The University recognises the importance of helping individuals to move and settle into a new area. We provide support and guidance to those relocating internationally or domestically to take up a post at the University of Cambridge, liaising with other University offices and selected partners to ensure comprehensive relocation support is available. This includes: accommodation, childcare, schools, banking, immigration and transport. If you would like further information, please visit <https://www.accommodation.cam.ac.uk/RelocationService/>. The Shared Equity Scheme and the Reimbursement of Relocation Expenses Scheme provide financial assistance to qualifying new members of staff with the costs of relocating to Cambridge.

## Accommodation Service

The University Accommodation Service helps staff, students and visiting scholars who are affiliated to the University in their search for suitable accommodation in Cambridge. The dedicated accommodation team can provide access to a wide range of University-owned furnished and unfurnished properties, and has a database of private sector accommodation available for short and long-term lets. For further information and to register with this free service please visit: <https://www.accommodation.cam.ac.uk/>





# What Cambridge can offer

**We offer a comprehensive reward package to attract, motivate and retain high performing staff at all levels and in all areas of work.**

The University offers a wide range of competitive benefits, from family leave entitlement, to shopping and travel discount schemes. Our generous annual leave package contributes to the positive wellbeing of our University employees. Sabbatical leave enables academics to focus on research and scholarship, whilst still maintaining their full salary. The University also has a career break scheme for academic and academic-related staff, with additional flexible working policies for all other staff.

## Pay and benefits

The University salary structure includes automatic service-related pay progression in many of its grades and an annual cost of living increase. In addition to this, employees are rewarded for outstanding contribution through a number of regular pay progression schemes. The University offers attractive pensions schemes for employees, with an additional benefit of a salary exchange arrangement providing tax and national insurance savings.



## CAMbens employee benefits

The University offers employees a wide range of competitive benefits, known as CAMbens. CAMbens offers something for everyone across a range of categories, including:

- Financial Benefits, including shopping discounts (both local and national) and a Payroll Giving scheme;
- Relocation and Accommodation Benefits, including relocation assistance and interest-free Rental Deposit Loans;
- Travel Benefits, including Cycle to Work, discounts on train season tickets and interest-free Travel to Work loans;
- Family Friendly and Lifestyle Benefits, including support with childcare and family friendly policies;
- Health and Wellbeing Benefits, including a University Staff Counselling Service, discounts at the University Sports Centre, and other local gyms, and healthcare schemes.





# What Cambridge can offer

## Family-friendly policies

The University recognises the importance of supporting its staff. We have a range of family-friendly policies to aid employees' work-life balance including a generous maternity, adoption and shared parental leave entitlement of 26 weeks' full pay, and paid emergency leave for parents and carers.

Other family-friendly support includes:

Our highly regarded workplace nurseries, a childcare salary exchange scheme and a high-quality holiday Playscheme are available to help support University employees with caring responsibilities (subject to demand and qualifying criteria). Further childcare information can be found here: <https://www.childcare.admin.cam.ac.uk/>

The Newcomers and Visiting Scholars Group (<https://www.nvs.admin.cam.ac.uk/>) is an organisation within the University that welcomes the partners and families of visiting scholars and new members of the University. Run by volunteers, the group offers opportunities to visit interesting Cambridge venues, learn about the community, take part in social events and gain local knowledge while developing a strong support network of both residents and other newcomers.

## Your wellbeing

The University's Sport Centre, Counselling Services and Occupational Health are just some of the support services available to University employees to promote their physical and mental wellbeing. The University delivers The Festival of Wellbeing annually, which is a programme of stimulating talks and activities, which aim to promote wellbeing and good mental and physical health. The University also hosts the Cambridge Festival, which is a great opportunity to get your first taste of public engagement, through volunteering, supporting hands-on activities or proposing a talk.

## Development opportunities

We support new employees to settle in through various activities as well as supporting their professional and career development on an ongoing basis. Our Personal and Professional Development (PPD) team provide development opportunities for all University employees, including face-to-face sessions, online learning modules and webinars. All employees also have unlimited access to LinkedIn Learning to support their development. Both new and existing employees can undertake funded Apprenticeships, which lead to a range of vocational and professional qualifications. We offer reduced staff fees for University of Cambridge graduate courses and the opportunity to attend lectures and seminars held by University departments and institutions. A range of University training providers also offer specialist learning and development in their own areas e.g. teaching and learning, digital literacy, finance, health and wellbeing, safety.



# How to Apply

Applications should be submitted online via the University of Cambridge jobs page [www.jobs.cam.ac.uk](http://www.jobs.cam.ac.uk) by clicking “Apply online” in the job advert. You will need an email address to register for our online system.

Conversations about flexible working are encouraged at the University of Cambridge. Please feel free to discuss flexibility prior to applying (using the contact information below) or at interview if your application is successful.

Informal enquiries are welcomed and should be directed to:

Dr Susanne Bornelöv

Email: [smb208@cam.ac.uk](mailto:smb208@cam.ac.uk)

If you have any queries regarding the application process, please contact:  
[personnel@bioc.cam.ac.uk](mailto:personnel@bioc.cam.ac.uk)

The closing date for applications is: Tuesday 8th July 2025

