



Sainsbury Wellcome Centre

**Innovation and Research Engineer (Electronics)
Information for Candidates**



Sainsbury Wellcome Centre for Neural Circuits and Behaviour at UCL



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JOB DESCRIPTION

Vacancy Reference:	1885375
Job Title:	Innovation and Research Engineer (Electronics)
Department:	Sainsbury Wellcome Centre
Salary:	£45,610- £53,757 per annum inclusive of London Allowance.
Grade:	8
Hours:	36.5 per week (full-time, 1.00 FTE)
Reports to:	Innovation and Research FabLab Manager
Available until:	31 October 2025 in the first instance

About the Sainsbury Wellcome Centre

The [Sainsbury Wellcome Centre](#) (SWC) brings together world-leading scientists to investigate how brain circuits process information to generate perception, form memories and guide behaviour. Developed through the vision and partnership of the Gatsby Charitable Foundation and Wellcome, and with substantial investment from these partners, the mission of the SWC is to generate experimentally testable theories of brain function.

The Centre comprises 12 highly interdisciplinary experimental research groups accommodated in a new, purpose-designed building, offering an outstanding and unparalleled research environment. SWC scientists use a broad spectrum of the latest advances in molecular and cellular biology, imaging, electrophysiology and behavioural techniques and enjoy state-of-the-art research laboratories, cutting-edge scientific equipment, technologically-advanced prototyping and fabrication laboratories and custom in-house high-performance computing facilities.

SWC is part of the [UCL School of Life and Medical Sciences](#) (SLMS). SLMS brings together four UCL Faculties to create one of the largest and most prestigious aggregations of academics in biomedical, life and population health sciences worldwide. The School has a global reputation for teaching, informed by cutting-edge research. SWC is most closely linked with the Faculties of Brain Science and Life Sciences, and is aligned administratively with Life Sciences. The Faculty of

Life Sciences leadership team works closely with the SWC leadership to support and enable their mission and facilitate research excellence.

Further details about UCL can be found at www.ucl.ac.uk.

Professional Services at the Sainsbury Wellcome Centre

SWC has a specialist and experienced professional services team. It is structured to efficiently support research activity and deliver effective management and operational leadership of the SWC.

SWC prides itself on offering a high quality administrative, technical and operational support function, and fully supports the professional development and progression of its staff, actively encouraging colleagues to learn new skills and broaden their experience. The SWC is supported in this aim [by UCL's Organisational Development team](#) who run a wide range of training programmes for all staff types and grades.

Work Environment

SWC offers staff an award-winning work environment in the heart of Fitzrovia with an on-site brasserie, access to lockers and changing facilities, secure bicycle storage, and access to pleasant outdoor spaces. The Centre also offers the full range of [UCL staff benefits](#), including a

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generous annual leave entitlement, occupational pension schemes, excellent family-friendly policies such as occupational shared parental pay, a work-life balance policy, and a range of financial benefits such as a season ticket loan scheme and staff discounts.

The Role of the Innovation and Research Engineer (Electronics)

The Innovation and Research Engineer (Electronics) performs highly skilled work through design, development, manufacture, assembly and validation of analogue and digital electronics. Working with the broader innovation and research team, the role holder supports and accelerates innovative scientific research through the design, development, and deployment of new research instruments.

The role holder must be able to work in an agile methodology to continuously design and produce prototypes to test scientific concepts while working towards the final deployment in the laboratory. They must be able to work within an agile team environment, applying modern design tools and innovative development processes. The nature of the role requires considerable practical capability, design ingenuity, multi-disciplinary awareness and creativity.

The role holder will be responsible for the use and maintenance of the groups in-house PCB prototyping facility. As such, they will assist engineers and scientists with their electronics needs ranging from advice to manufacturing prototype electronic circuits.

This post is funded until 31 October 2025 in the first instance.

Main Duties and Responsibilities

- Participates in the complete development lifecycle of experimental scientific equipment, from concept and design through to implementation, validation and deployment in the laboratory.
- Participates in discussion with scientists, fellow engineers and other collaborators of complex and diverse assignments.

- Applying a highly inventive mind-set to propose new ideas and concepts to solve often varying scientific technical requirements.
- Applying an innovative skill-set to implement new ideas (both own and from others) creating a tangible impact towards novel scientific research.
- Application of ECAD design tools for schematic capture, simulation and printed circuit layout. (Altium Designer).
- Development of real-time embedded microcontroller firmware applications (STM32CubeIDE).
- Integration of analogue and digital electronics, microcontrollers, sensors and actuators to form complex modular systems.
- Manufacture of low-volume electronic prototypes and assemblies using state-of-the-art prototyping equipment.
- Rework of electronic assemblies using state-of-the-art rework equipment.
- Use of hand tools for assembly of electronic circuits and fabrication of conceptual devices and prototypes.
- Precision assembly and validation of multi-disciplinary systems.
- Documentation of project information.
- Training scientists in the methods and safe-use of a separate MakerSpace facility integral to the centre.
- Supporting scientists' electronic needs as required.
- Maintaining the in-house PCB prototyping facility, procuring stock and ensuring a safe work environment.

The above description is not exhaustive and the post-holder will be required to undertake any other duties as may reasonably be requested within the scope, spirit and purpose of the post. Job descriptions are reviewed on a regular basis including at the annual appraisal. As duties and

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responsibilities change, the job description may be amended in consultation with the post-holder.

The post-holder will maintain an awareness and observation of Fire and Health & Safety Regulations.

The successful candidate will be expected to meet the behaviours set out in the [UCL Ways of Working](#).

The post holder will actively follow and promote all UCL policies including those on Equality, Diversity and Inclusion.

All staff are required to act professionally, co-operatively and flexibly in line with the requirements of the post.

Selection Criteria

The selection criteria outline the skills, knowledge and experience required in order to perform this role. Applicants will be selected based on how well they demonstrate that they meet the essential, and if appropriate, desirable criteria for this particular role.

	Essential	Desirable
Qualifications		
Degree level or master's in Electrical Engineering or equivalent professional experience specialised in analogue and digital electronics.	Essential	
Knowledge and experience		
Strong knowledge of Electrical Engineering (Electronics) fundamentals.	Essential	
Experienced in interpretation of customer requirements for electronic systems, translation into user stories and technical specification, R&D implemented with an agile methodology, culminating in a customer's deliverable.	Essential	
Design and development of a broad range of electronic devices and systems.	Essential	
Excellent knowledge of electronic engineering with the ability to convey expert advice.	Essential	
Expert at Electronic CAD for schematic capture, simulation and printed circuit layout for multilayer and flexi-rigid boards (Altium or equivalent professional application).	Essential	
Microcontroller firmware development and debugging in C/C++ using STM32CubeIDE, Keil uVision or equivalent Eclipse based IDE.	Essential	
Interfacing electronics and micro-controllers to sensors and actuators.	Essential	
Experienced with PCB manufacture technologies and processes.	Essential	
Interfacing electronics and micro-controllers to sensors and actuators.		Desirable
Experienced with PCB manufacture technologies and processes.		Desirable
PCB prototyping using LPKF in-house PCB prototyping technologies.		Desirable
PCB Assembly using Pick and Place (Fritsch 500 or equivalent).		Desirable
PCB Rework using a Rework Centre (Ersa HR550 or equivalent).		Desirable
Certified Interconnect Designer (CID or CID+).		Desirable
Skills		
Able to identify and solve a broad range of problems using an analytical approach, with demonstrable evidence of applying this methodology to identify interactions between hardware and software.	Essential	
Electronic circuit prototyping, manufacture and assembly of PTH and SMD.	Essential	
Hand soldering and rework down to 0.6mm pitch devices and 0603.	Essential	
Adept in producing project documentation (CAD files, diagrams, API documentation) for use, reproduction, maintenance and knowledge.		Desirable
Personal Attributes		
Innovative, with demonstrable evidence of positive outcomes from the implementation of your ideas.	Essential	
Ability to work in a fast-paced environment with multiple competing projects.	Essential	
Able to work in an agile engineering / science team and on own initiative, self-motivated and willing to learn.	Essential	

Inventive, with evidence of providing novel and creative solutions to problems.	Essential	
Able and willing to work flexibly to meet the needs of the Centre.	Essential	
UCL Ways of Working for Professional Services		
Delivering on commitments to tasks and people.	Essential	
Listening closely, and speaking with clarity to all colleagues, staff, students, and partners.	Essential	
Making sense of complex issues even when information is incomplete.	Essential	

HOW TO APPLY

Contact Us

If you have any queries relating to the vacancy or how to apply please contact the SWC HR team, swc.hr@ucl.ac.uk.

Applying for the Role

Redeployment Candidates

To begin the online application process, please access the advertisement by searching for it via the [UCL Redeployment Service](#) using the vacancy reference number.

Please complete the online application form, and use the supporting statement section to outline how you meet the selection criteria. Applications will be shortlisted based on the strength of the examples used to demonstrate that the applicant meets the selection criteria.

External Candidates

To begin the online application process, please access the advertisement by searching for it on the [UCL vacancy search page](#) using the vacancy reference number, and click on the “Apply Now” button at the bottom of the vacancy advertisement.

Please complete the online application form, and use the supporting statement section to outline how you meet the selection criteria. Applications will be shortlisted based on the strength of the examples used to demonstrate that the applicant meets the selection criteria.

Please note that there is a limit of 2,500 words to explain how you meet the essential criteria, and a limit of 2,500 words to explain how you meet the desirable criteria.

All candidates will be notified of the outcome of their application.

TERMS OF APPOINTMENT

Pre-employment Checks

Confirmation of appointment will be subject to receipt of satisfactory references, verification of proof of right to work in the UK and to satisfactory pre-employment health and security screening.

Salary

Starting salary will be on the Grade 8 scale according to relevant skills, knowledge, experience and achievement. Staff incrementally progress along the salary scale; the effective date of incremental progression is 01 August each year. You must have completed the period of service stipulated in your contract of employment (typically your probationary period) to be eligible to increment. Incremental progression does not include the discretionary contribution points on the salary scale. Cost of living pay awards are negotiated nationally and are normally effective from 1 August each year.

Pension

Post-holders will be eligible to join the Universities Superannuation Scheme (USS), subject to the Scheme's rules and eligibility conditions.

Conditions of Service

Conditions of Service for Research, Teaching and Professional Services Staff can be found online [here](#).

Probation

Appointments are subject to a probationary period of 9 months.

Hours of Work and Overtime

UCL's full time working week is 36.5 hours per week. SWC is willing to consider flexible-working arrangements, subject to discussion and agreement with your line manager.

Pre-agreed overtime will be offered as equivalent time off in lieu.

Annual Leave

Staff are entitled to 27 days annual leave per year (pro rata for part-time staff). In addition, staff are entitled to 8 days public and statutory holidays, and around 6 UCL closure days with pay per year.

Location

The Sainsbury Wellcome Centre is located in the heart of London around five minutes' walk from the main UCL campus. The mainline railway stations at Euston, King's Cross, St Pancras, Marylebone and Paddington are within easy reach as are the London Underground stations located at Warren Street and Goodge Street.

Equal Opportunities

SWC is committed to the promotion of equality, diversity and inclusion for its staff, students and visitors and is fully supportive of UCL's policy; the full equality policy statement is available [online](#)

SWC holds an [Athena SWAN](#) Bronze award.